COTATIDOWNTOWN CORE MASTER PLAN

December, 2000



Prepared by:





Credits

City of Cotati, California

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Walkable Cotati
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This report was prepared for the City of Cotati by Fisher & Hall Urban Design in conjunction with Winzler & Kelly and W-Trans. For background information on details in this report, contact Laura Hall at Fisher & Hall at (707) 544-1910.

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COTATI VISION PLAN (April 2000) PHASE I DESCRIPTION

"DEVELOP THE DOWNTOWN CORE"

The April 2000 Cotati Vision Plan stressed that, "It is very important to produce immediate results that stakeholders, press and other people can see. For example, a new section of sidewalk, new street lights, benches and trash receptacles, drinking fountains or freshly painted crosswalk and refuge islands are visible, while a transportation plan is a paper document that may never be seen or appreciated by the public. The point is that a program, to keep its momentum, needs some quick wins. These early achievements are real, vital and create the sense that something is happening; that government and business people are responsive."

The Cotati Vision Plan suggested a list of streetscape items as part of a Phase I design process. The City of Cotati authorized the design team to conduct a public process to identify and prioritize community preferences from this list, and to develop a Downtown Core Master Plan. The following is the list of items that were recommended in the Phase I of the Cotati Vision Plan:

	Wider sidewalks
	Additional diagonal parking on Old Redwood Hwy.
	Additional diagonal parking on side streets
	Median on Old Redwood Hwy.
	Street furniture
	Many sitting places
	Enlarge curb extensions
	Choke entry points to 24 feet
	Unified architectural character
	Narrow Old Redwood Highway to two lanes
	Add roundabouts at Old Redwood Hwy. and at La Plaza and Henry
\Box	Double canopy of trees
	Provide incentives for uniform façade
	Encourage new developers to share vision
	Identify and encourage residential service retail
	Improved management of parking
	Better defined plaza space
	More public art
	Eliminate blank walls
□ .	Unified quality store exterior appearance
	Quality bike parking
	Traffic calm outer hexagon
	Modify E. Cotati bicycle/pedestrian crossing

EXISTING CONDITIONS IN THE DOWNTOWN CORE

The following conditions exist in Downtown Cotati and present opportunities for streetscape improvements:



Some street tree roots are uplifting sidewalks and causing tripping hazards, such as this one in front of Exchange Bank.



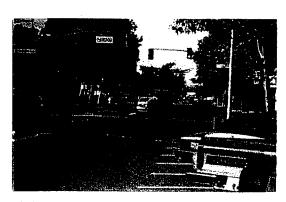
The gravel path at the bridge makes accessibility difficult for pedestrians, bicyclists and especially challenging for wheelchair users.



Streetlights are scaled for automobiles, not for pedestrians.



Large trucks in the downtown disturb the ambience for pedestrians and outdoor diners.

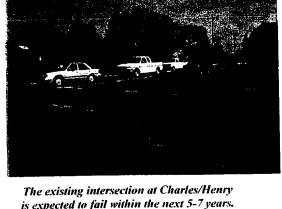


Drivers speeding through the E, Cotati Ave. & Old Redwood Hwy. intersection make dangerous conditions for pedestrians & bicyclists.

EXISTING CONDITIONS IN THE DOWNTOWN CORE (con'd.)



Some bicycle racks exist in the downtown, but more are needed.



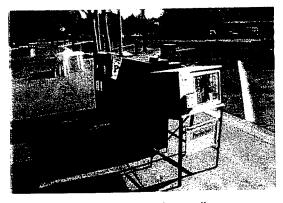
is expected to fail within the next 5-7 years.



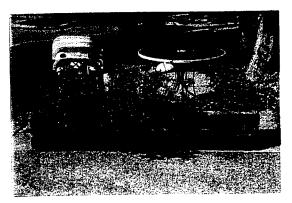
Existing pear trees have excessive leaf drop. causing a mess year-round mess for merchants.



Some existing tables and chairs need upgrading.



Existing newsracks need upgrading.

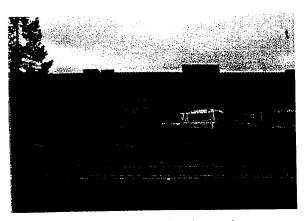


Some existing planters need apprading.

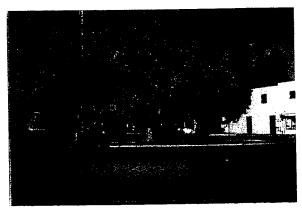
EXISTING CONDITIONS IN THE DOWNTOWN CORE (con'd.)



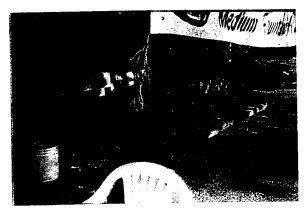
More and upgraded trash receptacles are needed in the downtown.



Merchants expressed an interest in having more parking in the downtown.



Blank walls detract from the character of the downtown.



More benches are needed in the downtown.

Public Involvement Process

OVERVIEW

Members of the community are the key players in the design of their downtown. Because of this, the design team conducted extensive meetings and other forms of outreach throughout the entire design process. This public involvement process included the following:

- Three sets of stakeholder meetings with the downtown merchants and property owners; Walkable Cotati; and emergency personnel;
- Two written surveys mailed to merchants and property owners in the downtown core;
- Two community workshops October 9th and November 9th;
- Joint City Council/Planning Commission and Design Review Committee public hearing December 6th, and
- City Council meeting December 13th.

These meetings, surveys and public hearings are all described more fully in the following pages.

STAKEHOLDER MEETINGS

A series of stakeholder meetings were held throughout the design process. Meetings with Walkable Cotati and downtown merchants and property owners took place at City Hall as well as in the downtown core. The design team met with members of the Cotati Police Department and Rancho Adobe Fire District, both at City Hall and in an infield roundabout demonstration. The following images are from some of these stakeholder meetings:



Meeting with the merchants in the downtown.



Merchants discussing options for use of space.



Meeting with Walkable Cotati.



Members of Walkable Cotati identifying locations for new street furnishings.



Field demonstration of emergency vehicles navigating roundabouts of various sizes.



Meeting with Chief of Police Robert Stewart and Fire Battalion Chief Fred Bechtold.

SURVEYS

Two surveys were sent to downtown property owners and merchants in the core area. Survey #1 was mailed on Sept. 27, 2000. [A copy of this survey can be found in the appendix of this report.] Following are the results of the surveys.

SURVEY #1

1. **DOWNTOWN MERCHANTS** (23 mailed, 11 returned):

Question #1: What most benefits you <u>currently</u> in operating a business in Downtown Cotati? (check as many as apply)

- 1. Lots of pedestrians (6 responses)
- 2. Out-of-towners driving through Cotati (5)
- 3. Lots of car traffic (4)
- 4. The variety of shops and services (3)
- 5. Accessibility (1)
- 6. Central County location (1)
- 7. Great location (1)
- 8. Quaint buildings and atmosphere (1)
- 9. Plentiful parking (1)
- 10. Outdoor seating (1)

Question #2: What are the biggest obstacles you face in operating a business in Downtown Cotati? (check as many as apply)

- 1. Noisy trucks (6)
- 2. Not enough landscaping/color (5)
- 3. Inadequate lighting (4)
- 4. Not enough parking (4)
- 5. Not enough variety of businesses (4)
- 6. Inadequate signage (2)
- 7. Not enough shade (1)
- 8. Not enough vehicular traffic (1)
- 9. Not enough seating (1)

Question #3: Phase 1 of the Cotati Vision Plan could include the following <u>new amenities</u> for downtown. Prioritize the ones that would most improve your business.

- 1. Public art, banners, additional diagonal parking on side streets
- 2. Pedestrian-scaled lighting, street clock, more trash cans, attracting recycling containers, public restrooms, hanging baskets, more public benches, attractive newsstands
- 3. Flower kiosks, drinking fountains
- Quality bike parking
- 5. Public telephones, awnings

Question #4: The existing traffic control at Charles/Henry – a 4-way stop – is projected to fail within the next 5 years. What solution for that intersection would best benefit your business?

- 1. Traffic signal (4)
- 2. Roundabout (3)
- 3. Do nothing (2)
- 4. Prohibit large trucks (1)

Question #5: In response to concerns about unsafe traffic speeds and pedestrian safety at Old Redwood Highway and La Plaza, what solution for that intersection would best benefit your business?

- 1. Do nothing (5)
- 2. Roundabout at Old Redwood Highway/La Plaza (2)
- 3. Traffic signal (2)

Question #6: Street construction work in the downtown will occur next year. During this process, what construction periods would be the <u>least</u> detrimental to your business?

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1. <u>Time of day:</u>
1<sup>st</sup> choice – mornings, early mornings (7), early morning to mid-afternoon (1)
2<sup>nd</sup> choice – evening (2), late afternoon (1)
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2. Day of week:

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    1st choice - Monday (1), Monday - Friday (1), Monday - Wednesday (1), Saturday - Monday (1), Tuesday (1), any (1), Monday - Thursday (1), Monday - Tuesday (1)
    2nd choice - Monday - Wednesday (1), Wednesday (2), Sunday - Wednesday (1)
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3. <u>Time of year:</u>
1st choice – Winter (2), summer (2), June (1), August (1), spring (1), January (1)
2nd choice – July (1), summer (1), February (2), spring (1)

Question #7: To guide us to an appropriate style of new street amenities, what do you see as representing the essence of Cotati? (check as many as apply)

- 1. Traditional small town (6)
- 2. Native American/Chief Kotate (5)
- 3. Arts, dance and music (5)
- Craftsman style (4)
- 5. Eclectic/quirky (2)
- 6. Rural (1)

Question #8: What is important to you about new street trees in the downtown? (check as many as apply)

- 1. That they don't block my store sign (5)
- 2. That twinkle lights can be hung on them (3)
- 3. That they don't block the sun in the winter (3)
- 4. That they provide plenty of shade (2)
- 5. Minimum cleanup (1)
- 6. More color (1)
- 7. Large trees (1)
- 8. Don't need new street trees (1)

9. Other: The trees in downtown should be saved. As an alternative to removing them is to redo the sidewalks. While not exactly "heritage" trees, the mature sycamores signify that Cotati is an established town with a history, not just another strip mall.

Question #9: Is there anything else that you would like to tell us about street improvements for Downtown Cotati?

- Eliminate the truck route through town.
- Pedestrian crossing should be better marked (i.e., downtown Petaluma)
- All traffic needs to slow down.
- Hanging flower baskets on street lamps or whatever would be a very nice touch.
- More landscaping shrubs, trees, flowers could help soften the flat fronts of some of the buildings.
- The sign size is too small for some of the buildings.
- The downtown area looks somewhat run down and dirty. There really isn't any point in making
 improvements if they won't be maintained. Our sidewalk needs sweeping, flowerbeds cleaned up,
 buildings need to be painted and kept up. Even what we've got right now would look better if it were
 cleaned up and maintained.
- I've had my business for 20 years. The streets of Downtown Cotati are fine and fully functional! Why not use the money elsewhere, like a recreation center for Cotati youth.
- Eliminate all the wild youth at the Inn of the Beginning. They become violent after hours.
- Too many bars. We need more cultural and traditional activities; a safe place for children and senior citizens. Eliminate liquor licenses and restrict bar activities. More flowers and more trees and more benches.
- Road signs need to be attractive and clearly marked (can't see Charles St. sign). Attractive, well-landscaped downtowns with good parking (preferable off the main street o make downtown more amendable to pedestrians) attract pedestrians and shoppers.
- Installing curbs & gutters on Charles and Henry Streets would automatically increase parking.
 Reverse-in diagonal parking is a very bad idea. Consider the person tailgating you when you want to back in.

2. **DOWNTOWN PROPERTY OWNERS** (11 mailed, 2 returned):

Question #1: What most benefits you <u>currently</u> in operating a business in Downtown Cotati? (check as many as apply)

- 1. The variety of shops & services
- 2. Plentiful parking
- 3. Lots of seating
- 4. Out-of-towners driving through Cotati.

Question #2: What are the biggest obstacles you face in operating a business in Downtown Cotati? (check as many as apply)

- 1. Inadequate lighting (2)
- 2. Not enough parking (2)
- 3. Not enough landscaping/color (2)
- 4. Noisy trucks (2)
- 5. Not enough seating (1)

Question #3: Phase I of the Cotati Vision Plan could include the following <u>new amenities</u> for downtown. Prioritize the ones that would most improve your business.

- 1. Additional diagonal parking on side streets, drinking fountains, pedestrian-scale lights, flower kiosks, hanging baskets
- 2. More public benches, attractive newsstands, banners

Question #4: The existing traffic control at Charles/Henry – a 4-way stop – is projected to fail within the next 5 years. What solution for that intersection would best benefit your business?

1. Traffic signal (2)

Question #5: In response to concerns about unsafe traffic speeds and pedestrian safety at Old Redwood Hwy. and La Plaza, what solution for that intersection would best benefit your business?

1. Do nothing (2)

Question #6: Street construction work in the downtown will occur next year. During this process, what construction periods would be the <u>least</u> detrimental to your business?

- 4. Time of day:

 1st choice late night (2)

 2nd choice late night (2)
- 5. <u>Day of week:</u>
 1st choice Monday (1), Sunday (1)
 2nd choice Monday (2)
- 6. Time of year:

 1st choice winter (2)

 2nd choice winter (20)

Question #7: To guide us to an appropriate style of new street amenities, what do you see as representing the essence of Cotati? (check as many as apply)

- 1. Traditional small town (2
- 2. Western "Old Town" (1)

Question #8: What is important to you about new <u>street trees</u> in the downtown? (check as many as apply)

1. That twinkle lights can be hung on them (2)

Question #9: Is there anything else that you would like to tell us about street improvements for Downtown Cotati?

- Street garbage cleanup regularly
- Flowers for landscaping baskets, etc.
- Signal lights will provide safety. There have been no pedestrian injuries in 30 years, may more. Roundabouts are desirable only to the landscape on perimeters of the town.

SURVEY #2

A second survey [see sample in Appendix] was mailed to downtown merchants and property owners in November 2000. Merchants and property owners were asked to select their preferred streetscape and intersection designs. The results are as follows:

1. <u>DOWNTOWN MERCHANTS</u> (24 mailed, 18 returned, 5 phoned in their response, 1 did not respond):

Streetscape

Alternative 1 - 2 votes Alternative 2 - 15 votes

Charles/Henry intersection

Alternate 1 - Traffic signal

Alternate 2A - Roundabout with oak tree

Alternate 2B - Roundabout with jazz musician sculpture

8 votes

2. <u>DOWNTOWN PROPERTY OWNERS</u> (10 mailed, 7 returned)

Streetscape

Alternative 1 - 1 vote Alternative 2 - 4 votes

Charles/Henry intersection

Alternate 1 - Traffic signal 6 votes
Alternate 2A - Roundabout with oak tree 1 votes
Alternate 2B - Roundabout with jazz musician sculpture 0 votes

COMMUNITY WORKSHOPS

Community workshops were held on October 9, 2000 and November 9, 2000. At the October 9th workshop, the community prioritized their preferences for downtown improvements from images that were based upon the list of Phase 1 suggestions from the Cotati Vision Plan of April 2000 (refer to Part One, "Cotati Vision Plan"). The following images are from the October 9th workshop:



Community Workshop #1 - residents discuss pros and cons of various streetscape images.

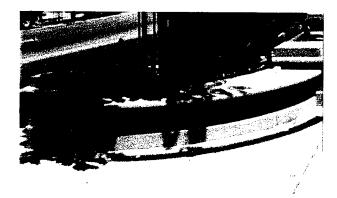


Voting on bench preferences.



Pondering a vote.

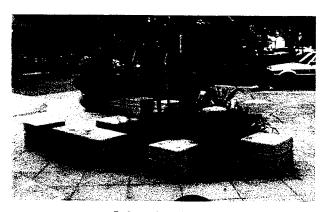
Following are the streetscape furnishing images and street design ideas that the community preferred for the downtown core area:



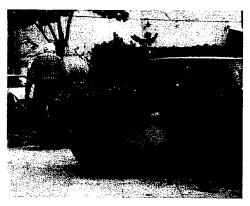
Seatwalls of case stone.



Naturalistic planting in tree wells.



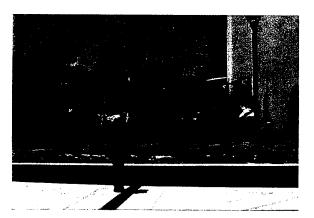
Informal seating



Large terra cotta pots



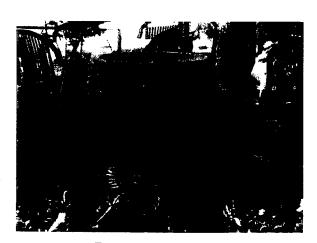
Wooden bench surrounded by plantings



Whimsical public art



Pedestrian-scaled acorn lighting with hanging flower baskets



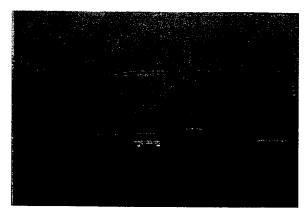
Terra cotta street fountain.



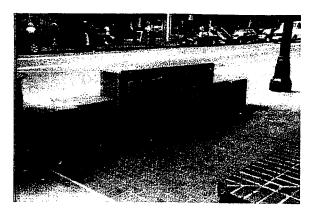
Twinkle lights in street trees



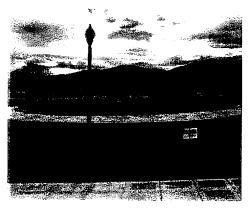
Metal tree grates



Traffic signal for Henry/Charles intersection like this one at W. Sierra and Old Redwood Hwy. (10 votes)



Cast stone newsracks



Landscaped roundabout image for Henry/Charles intersection (9 votes)



Decorative arch over pedestrian passageway



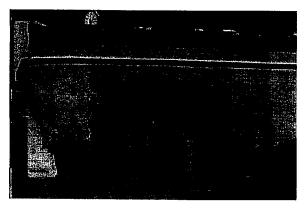
Sculptural roundabout image for Henry/Charles intersection (4 votes)



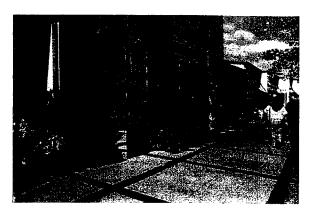
Flower kiosk



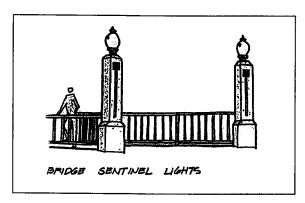
Example of a decorative element for parking lot entrance.



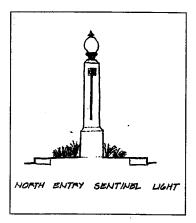
Mural example on side of blank building wall.



Decorative trellis on side of blank building wall.



South entry - lighted sentinels at bridge



North entry - lighted sentinel in median

At the October 9th workshop, the community also voted on what they felt was the "essence of Cotati." Following are the tallied votes:

- 1. Arts, dance and music (10)
- 2. Eclectic/quirky (9)
- 3. Craftsman style (8)
- 4. Traditional small town (3
- 5. Native American/Chief Kotate (3)
- 6. Hip college town (2)

The design team used the information gathered at the first community workshop and prepared preliminary design plans. The community gave further feedback on November 9th, 2000, as shown in this image below:



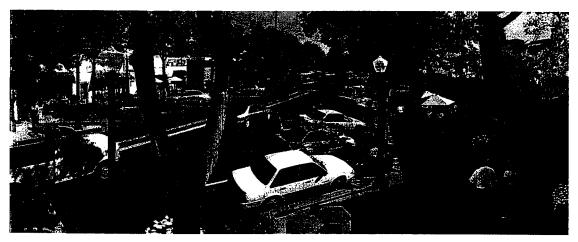
Community Workshop #2 -Residents select final design images.

The vote tallies for the preferred streetscape image and Charles/Henry intersection design are shown in Part Three, "Alternatives."

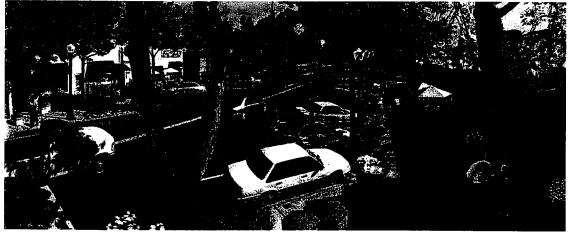
ALTERNATIVES Streetscape Alternatives



EXISTING CONDITIONS: Existing streetscape in front of Inn of the Beginning - O votes



ALTERNATE 1: Digitally-enhanced image of streetscape improvements (straight curb, gray concrete, acorn lighting, café seating, seating cubes, metal flower pots) - 10 votes



ALTERNATE 2: Digitally-enhanced image of streetscape improvements (saw-tooth curb, colored concrete with tile inlays, acorn lighting, café seating, seating cubes, terra cotta flower pots) - 30 votes

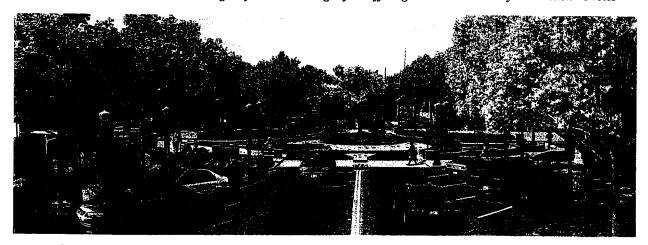
ALTERNATIVES Intersection Alternatives



EXISTING CONDITIONS: Existing 4-way stop at Charles/Henry intersection



Alternate 1 - TRAFFIC SIGNAL: Digitally-enhanced image of a traffic signal at Charles/Henry intersection - 8 votes



Alternate 2A - OAK TREE ROUNDABOUT: Digitally-enhanced image of roundabout with oak tree - 30 votes

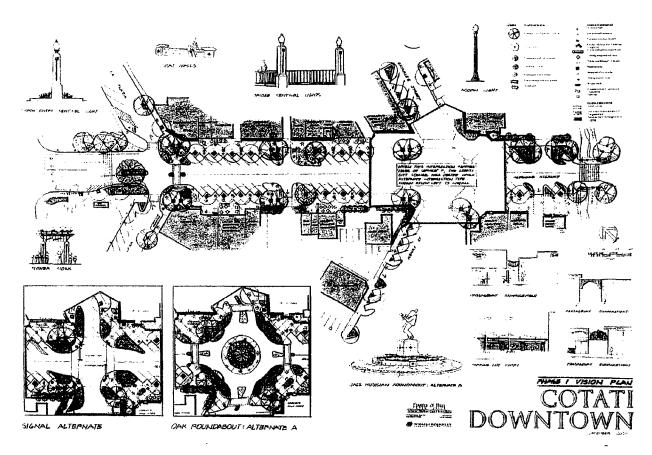
Intersection Alternatives (con'd.)



Alternate 3A - JAZZ MUSICIAN ROUNDABOUT:
Digitally-enhanced image of roundabout with jazz musician sculpture - 3 votes

SELECTED PLAN Downtown Core Master Plan

The participants in this design process preferred Streetscape Alternate #2 over Streetscape Alternate #1. This preferred option includes colored concrete, terra cotta pots and a saw-tooth curb, which is reflected in the Master Plan below. Because the community is still divided over whether to install a roundabout at the Charles/Henry intersection, and the fact that this intersection is not expected to fail for another 5 years, the Master Plan reflects the various design options for that intersection – traffic signal, oak tree roundabout or jazz musician roundabout – from which the City Council may select when it does fail.



Final Downtown Core Master Plan

DOWNTOWN CORE BASE PROJECT

At the December 6th public hearing, the City Council determined a base project (Alternate 3A) based upon the Downtown Core Master Plan and the funds currently available, which included the following:

- Install the decorative and traffic calming features at the north and south entry points of the downtown.
- Repair uplifted sidewalks root prune offending trees, add structural soil and tree grates, and replace sidewalks with new, colored concrete.
- Keep the existing 4-way stop at the Charles/Henry intersection until such time as that intersection fails.
- With the help of the community, determine an alternative, less controversial location for a roundabout so that the community can get some experience with it and decide if they would like to eventually build one in the downtown core. The City Council indicated general support for the use of roundabouts in Cotati.

Cost estimates for Alternate 3A Base Project, as well as for the three alternate master plans (Alternate 1 – Traffic Signal, Alternate 2A – Oak tree roundabout and Alternate 2B – Jazz musician roundabout, are included in the Appendix of this report.

Working drawings for the Base Project are currently underway, and construction is scheduled to begin in the year 2001.

MAINTENANCE

Maintenance planning is important to keep the area clean, the plants healthy and to give a strong sense of community ownership to the downtown core. Additional funding needs to be allocated to be able to increase the level of maintenance in the downtown. The following maintenance tasks and their frequencies are recommended:

Street

- Sweep street (weekly or monthly)
- Slurry seal, re-striping, or other (Per City Engineer)

Sidewalk and crosswalks

- Broom or blower clean (weekly)
- Steam clean (Spring and Fall)

Benches

- Paint or stain (annually or every other year)
- Repair and replace portions (every 10 years)

Trash receptacles

- Empty bins (bi-weekly as needed)
- Paint (annually or every other year)

Bike racks

• Paint (annually or every other year)

Signage

Replace (as needed)

Planters and seat walls

• Repair and replace masonry (every 10 years)

Irrigation

- Check operation of backflow preventer (quarterly)
- Reschedule controllers (biannually)
- Check operation of all valve circuits (monthly or quarterly)
- Clear sprinkler nozzles when necessary (annually in late winter to early spring)
- Repair and replace heads (as necessary)
- Repair and replace valves (as necessary)

MAINTENANCE (con'd.)

Planting

- Replace annual color (Spring and Fall)
- Fertilize (annually, bi-annually, or tri-annually)
- Trim trees (check with City arborist)
- Selective pruning of shrubs (biannually to annually)
- Edging of groundcover (monthly to quarterly)
- Weed control (monthly, bi-annually)
- Pest control (as needed)
- Add mulch (annually as needed)
- Litter removal (weekly)
- Replace planting (as necessary)

Hanging Baskets

• Replace plantings in Spring and Fall. Although hanging baskets were one of the most popular streetscape elements during the public hearing process, the maintenance costs in current dollars run \$200 per basket per changeover, or \$800 per year for each streetlight with two baskets. If the City is able to secure special funding for these costs, baskets can be added to the streetlights at a later date, providing that the streetlights have irrigation lines stubbed out to them during construction.

Appendix



Cotati downtown merchants - We need your input!

We are beginning to work on the design development of Phase 1 of the Cotati Vision Plan, which covers Old Redwood Highway from La Plaza to Charles/Henry. Please help us meet your needs by answering the following questions:

1. What most <u>benefits</u> you <u>currently</u> in operating a business in downtown Cotati? (check as many as apply)

☐ The variety of shops & services	□ Lots of seating
□ Plentiful parking	Out-of-towners driving through Cotati
☐ Lots of pedestrians	□ Lots of car traffic
Other:	Other:

2. What are the biggest <u>obstacles</u> you face in operating a business in Downtown Cotati? (check as many as apply)

☐ Inadequate lighting	□ Not enough shade
□ Not enough seating	□ Noisy trucks
□ Not enough parking	☐ Inadequate signage
□ Not enough variety of businesses	□ Not enough vehicular traffic
□ Not enough landscaping/color	☐ There are no obstacles

3. Phase 1 of the Cotati Vision Plan could include the following <u>new amenities</u> for downtown. Prioritize the ones that would <u>most</u> improve your business, starting with 1,2,3...... (Also, suggest locations for the new amenities on the <u>attached map</u>.)

More public benches	Public art
Add'l. diagonal parking on side streets	Quality bike parking
Public telephones	More trash cans
Drinking fountains	Attractive recycling containers
Attractive newsstands	Flower kiosks
Pedestrian-scale lights (i.e., acorn lights)	Public restrooms (kiosk-type)
Street clock	Hanging baskets
Banners	Other:

benefit your business?	
□ Do nothing	☐ Remove stop signs
☐ Traffic signal at Charles/Henry	☐ Roundabout at Charles/Henry
Other:	☐ Other:
. In response to concerns about unsafe Old Redwood Highway and La Plaza, w best benefit your business?	traffic speeds and pedestrian safety of that solution for that intersection would
☐ Do nothing	☐ Roundabout at Old Redwood Hwy/La P
☐ Traffic signal:	Other:
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	Santa Rosa, CA 95404
	(707) 544-1910
	FAX (707) 544-1944
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	Attend a <u>Community Workshop</u> on:
	Monday, October 9 th
	Cotati City Hall
	7:00 PM
	Questions? Contact Dale Shaddox, City Manager
	(707) 792-4600, ext. 620
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Page 3 of 3

[See map on opposite side]

DOWNTOWN CORE BASE PROJECT

At the December 6th public hearing, the City Council determined a base project (Alternate 3A) based upon the Downtown Core Master Plan and the funds currently available, which included the following:

- Install the decorative and traffic calming features at the north and south entry points of the downtown.
- Repair uplifted sidewalks root prune offending trees, add structural soil and tree grates, and replace sidewalks with new, colored concrete.
- Keep the existing 4-way stop at the Charles/Henry intersection until such time as that intersection fails.
- With the help of the community, determine an alternative, less controversial location for a roundabout so that the community can get some experience with it and decide if they would like to eventually build one in the downtown core. The City Council indicated general support for the use of roundabouts in Cotati.

Cost estimates for Alternate 3A Base Project, as well as for the three alternate master plans (Alternate 1 – Traffic Signal, Alternate 2A – Oak tree roundabout and Alternate 2B – Jazz musician roundabout, are included in the Appendix of this report.

Working drawings for the Base Project are currently underway, and construction is scheduled to begin in the year 2001.

MAINTENANCE

Maintenance planning is important to keep the area clean, the plants healthy and to give a strong sense of community ownership to the downtown core. Additional funding needs to be allocated to be able to increase the level of maintenance in the downtown. The following maintenance tasks and their frequencies are recommended:

Street

- Sweep street (weekly or monthly)
- Slurry seal, re-striping, or other (Per City Engineer)

Sidewalk and crosswalks

- Broom or blower clean (weekly)
- Steam clean (Spring and Fall)

Benches

- Paint or stain (annually or every other year)
- Repair and replace portions (every 10 years)

Trash receptacles

- Empty bins (bi-weekly as needed)
- Paint (annually or every other year)

Bike racks

• Paint (annually or every other year)

Signage

• Replace (as needed)

Planters and seat walls

• Repair and replace masonry (every 10 years)

Irrigation

- Check operation of backflow preventer (quarterly)
- Reschedule controllers (biannually)
- Check operation of all valve circuits (monthly or quarterly)
- Clear sprinkler nozzles when necessary (annually in late winter to early spring)
- Repair and replace heads (as necessary)
- Repair and replace valves (as necessary)

MAINTENANCE (con'd.)

Planting

- Replace annual color (Spring and Fall)
- Fertilize (annually, bi-annually, or tri-annually)
- Trim trees (check with City arborist)
- Selective pruning of shrubs (biannually to annually)
- Edging of groundcover (monthly to quarterly)
- Weed control (monthly, bi-annually)
- Pest control (as needed)
- Add mulch (annually as needed)
- Litter removal (weekly)
- Replace planting (as necessary)

Hanging Baskets

• Replace plantings in Spring and Fall. Although hanging baskets were one of the most popular streetscape elements during the public hearing process, the maintenance costs in current dollars run \$200 per basket per changeover, or \$800 per year for each streetlight with two baskets. If the City is able to secure special funding for these costs, baskets can be added to the streetlights at a later date, providing that the streetlights have irrigation lines stubbed out to them during construction.

Appendix



Cotati downtown merchants - We need your input!

We are beginning to work on the design development of Phase 1 of the Cotati Vision Plan, which covers Old Redwood Highway from La Plaza to Charles/Henry. Please help us meet your needs by answering the following questions:

1.	What most benefits you currently in operating a business in downtown C	Cotati?
	(check as many as apply)	

☐ The variety of shops & services	☐ Lots of seating
☐ Plentiful parking	☐ Out-of-towners driving through Cotati
☐ Lots of pedestrians	□ Lots of car traffic
☐ Other:	Other:

2. What are the biggest <u>obstacles</u> you face in operating a business in Downtown Cotati? (check as many as apply)

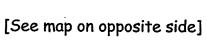
☐ Inadequate lighting	□ Not enough shade
□ Not enough seating	□ Noisy trucks
□ Not enough parking	□ Inadequate signage
☐ Not enough variety of businesses	□ Not enough vehicular traffic
□ Not enough landscaping/color	☐ There are no obstacles

3. Phase 1 of the Cotati Vision Plan could include the following <u>new amenities</u> for downtown. Prioritize the ones that would <u>most</u> improve your business, starting with 1,2,3...... (Also, suggest locations for the new amenities on the <u>attached map</u>.)

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Street clock	Hanging baskets
Banners	Other:

benefit your business?	
□ Do nothing	☐ Remove stop signs
☐ Traffic signal at Charles/Henry	☐ Roundabout at Charles/Henry
☐ Other:	Other:
In response to concerns about unsaf	e traffic speeds and pedestrian safety a
Old Redwood Highway and La Plaza	what solution for that intersection would
best benefit your business?	What Section for that intersection would
□ Do nothing	☐ Roundabout at Old Redwood Hwy/La Pl
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Walkable Cotati Phase 1 Traffic Analysis

for the City of Cotati

January 2001

Downtown Cotati: Property Owner's Survey No. 2

Options for Streetscape Design

Due November 27, 2000

Preferred option (pick one)

Existing Streetscape



Alternate No. 1



Alternate No. 2



Note: Your identity will be kept confidential

FISHER & HALL

Cown Planning . Plaza Design . Ecological Design . Education

Downtown Cotati: Property Owner's Survey No. 2

Options for Charles/Henry Intersection

Preferred
ption
(pick one)

Due November 27, 2000

Signalized Intersection



Roundabout with Oak Tree



Roundabout with Jazz Musician Sculpture



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FLAHER & HALL

Town Planning . Plasa Design . Ecological Design . Education

618 Fourth Street, Suite 203 Santa Rosa, CA 95404 707, 544,1910 FAX 707, 544,1944

Introduction

This report is a compilation of written reports and presentation slides which presents an analysis of design alternatives and traffic impacts that would be expected with the installation of improvements on Old Redwood Highway between Henry/Charles Streets and La Plaza South. These improvements were recommended as part of the Phase 1 implementation plan in City of Cotati Vision Plan (Walkable Cotati), April 2000.

Existing Conditions

Old Redwood Highway is a two-lane facility south of La Plaza South with 45 degree angled parking on both sides of the street. The west side of the street was previously striped with parallel parking, but was recently converted to the diagonal alignment. There is a 4-foot striped median and 14-foot travel lanes in both directions. The intersection of Redwood Highway/Henry Street-Charles Street is controlled by all-way stop controls while Old Redwood Highway/La Plaza South is stop-controlled on the eastbound approach of La Plaza South. Approximately 150 feet separate the intersection of Old Redwood Highway/La Plaza South and Old Redwood Highway/East Cotati Avenue. The East Cotati Avenue intersection is controlled by a traffic signal.

The existing street alignment, striping and other geometric conditions are shown in Figures 1A and 1B (See Powerpoint slides).

Weekday a.m. and p.m. peak hour turning movements were collected August 16 and 17, 2000, for the intersections of Old Redwood Highway/Henry Street-Charles Street and Old Redwood Highway/La Plaza South. Currently the traffic volume on Old Redwood Highway between Henry Street-Charles Street and La Plaza South is approximately 900 vehicles per hour during the p.m. peak period and 10,100 vehicles per day with approximately 1,250 vehicles entering the intersection of Old Redwood Highway/Henry Street-Charles Street and 870 vehicles entering Old Redwood Highway/La Plaza South during the p.m. peak hour.

Intersection operating conditions were evaluated by determining the intersection's Level of Service. Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. The LOS designation is generally accompanied by a unit of measure which indicates a level of delay. Methodologies from the *Highway Capacity Manual*, Special Report No. 209, Transportation Research Board, 1997, were used to determine intersection level of service. The City of Cotati's General Plan Circulation Element allows a maximum LOS D at intersections. A complete description of the methodology and the Level of Service criteria is provided in Appendix A.

Based upon the observed traffic conditions and Level of Service analysis using the existing traffic volumes, Old Redwood Highway between Henry Street-Charles Street is currently operating at LOS D during the p.m. peak hour. The northbound approach experiences the most significant delay and queuing during the p.m. peak hour with queues extending several hundred feet. The intersection of Old Redwood Highway/La Plaza South is operating at LOS A with minor delay to the side street movement which has very low traffic volumes. A summary of the Level of Service calculations is contained in Table 1 and copies are provided in Appendix B.

The adjacent signalized intersection of Old Redwood Highway/West Sierra Avenue-East Cotati Avenue currently operates at LOS C during the PM peak hour and has observed vehicle backups on the south leg of the intersections of 23 vehicles (11 to 12 vehicles in each lane). The vehicle queue, or backup, frequently

extends into the La Plaza South intersection. A preliminary evaluation was made of the performance of the signalized intersection and several minor improvements were tested to reduce vehicle backups. There was no easy solution which would improve this condition without increasing delay and congestion on other approaches to the intersection.

Future Traffic Conditions

Future p.m. peak hour traffic volumes were obtained from the Citywide Traffic Analysis for the General Plan Update, Whitlock & Weinberger Transportation, Inc., 1996. Future traffic volumes which were based on a 20-year horizon and buildout of the City's current General Plan were only available for the intersection of Old Redwood Highway/East Cotati Avenue, however, these projections were extrapolated to the two study intersections. These projections were based on the assumption that traffic on Old Redwood Highway will increase to approximately 1,370 vehicles per hour during the p.m. peak period and 15,300 vehicles per day, with approximately 1,820 vehicles entering the intersection of Old Redwood Highway/ Henry Street-Charles Street and 1,400 vehicles entering Old Redwood Highway/La Plaza South during the p.m. peak hour. These projections represent an approximate 50 percent increase in traffic over existing levels.

Based on the future traffic projections, Old Redwood Highway between Henry Street-Charles Street is expected to operate at LOS F during the p.m. peak hour. The intersection of Old Redwood Highway/La Plaza South would be expected to continue operating at LOS A with delay increased to the LOS C range for the side street traffic. A summary of the Level of Service calculations is contained in Table 1 and copies are provided in Appendix B.

Table 1
Summary of Intersection Level of Service Calculations

I	ntersection	· F	Existing (Conditions	5	Futi	ıre*
	Approach	A.M.	Peak	P.M.	Peak	P.M.	Peak
		Delay	LOS	Delay	LOS	Delay	LOS
1	Old Redwood Highway/Henry StCharles St.						
	Existing 4-way Stop	7.7	В	22.6	D	75.0	F
	Roundabout	0.6	\boldsymbol{A}	0.7	\boldsymbol{A}	1.3	A
2	Old Redwood Highway/La Plaza South						
	Existing Intersection Overall	0.3	Α	0.3	A	0.6	Α
	Existing La Plaza Approach	4.2	Α	4.9	A	10.8	С
	Roundabout	0.1	A	0.1	A	0.3	A

Notes: Delay = average delay in seconds per vehicle

LOS = Level of Service

^{* =} Future represents General Plan Buildout Conditions

Design Options

The following three options were examined.

Option 1 - The installation of one roundabout at either Old Redwood Highway/Henry Street-Charles Street or Old Redwood Highway/La Plaza South.

Option 2 - The installation of two roundabouts at Old Redwood Highway/Henry Street-Charles Street and Old Redwood Highway/La Plaza South.

Option 3 - No roundabouts with street narrowing and medians on Old Redwood Highway between La Plaza South and Henry Street-Charles Street.

Characteristics of Modern Roundabouts

In March the Federal Highway Administration (FHWA) published *Roundabouts: An Informational Guide*, which provides design guidelines as well as discussions of the operational impacts of roundabouts. Following is a synthesis of the pros and cons typically associated with modern roundabouts based on discussion in the FHWA guide.

Pros

- Vehicular Safety The conversion of existing intersections to roundabout-controlled intersections has been found by the FHWA to result in a 37 percent reduction in total traffic collisions, with a 51 percent decrease in *injury* collisions.
- Pedestrian Safety The conversion of existing intersections to roundabout-controlled intersections has been found to decrease the number and severity of pedestrian accidents by as much as 73 percent according to one Dutch study of 181 intersections.
- Capacity and Delay Times For a given approach width, roundabouts are capable of handling a
 higher volume of vehicles than other types of intersection controls. At many intersections, and in
 particular those that are all-way stop-controlled, roundabouts will have lower average vehicle delay
 and better Levels of Service.
- U-turns The ability to make U-turns is relatively easy and safe at roundabout-controlled intersections. This can facilitate parking circulation, and can improve access from driveways along adjacent street segments where left turns are difficult or prohibited.
- Fuel Consumption, Air Quality, and Energy By reducing the amount of rapid acceleration and
 deceleration associated with other types of intersection controls, roundabouts typically cause vehicles
 to consume less fuel and correspondingly lead to lower vehicle emissions. Roundabouts also use no
 electricity other than lighting, and have a longer expected service life than signalized intersections.
- Aesthetics Roundabouts provide an excellent opportunity for landscaping and/or public art.
- Traffic Calming Roundabouts require vehicles to travel at lower speeds and are particularly suitable for traffic calming when used with other treatments such as road narrowing, etc.

Cons

- Safety for Visually Impaired Persons Roundabouts do not have the same audible queues as used by
 visually-impaired pedestrians to cross stop-controlled and signalized intersections, and may require
 special design treatments to accommodate these users.
- Initial Confusion and Driver Unfamiliarity Drivers who are unfamiliar with roundabouts may become timid or uncertain upon approach to the intersection, and may violate yield controls or stop at inappropriate times, potentially resulting in minor accidents.

Pro/Con

- Public Acceptance of Roundabouts In the United States, it has been found that many communities
 experience public opposition to roundabouts in the early planning stages. After construction and some
 time to acclimate, however, public opinion typically shifts in a much more positive direction.
- Bicyclist Safety Studies of bicycle safety at roundabouts have yielded mixed results. It appears that
 an increase in bicycle accidents is associated with some roundabouts, although more so at higherspeed, multi-lane intersections than under lower-speed downtown environments. The Urban Compact
 Roundabout designs considered for the Cotati project are intended to be pedestrian and bicycle friendly
 according to the FHWA guidelines. Bicyclists would, however, expect to be safely accommodated in
 the lower-speed, pedestrian-oriented downtown Cotati environment.

Roundabout Operations

The two study intersections were evaluated assuming a roundabout for traffic control. The SIDRA software, which is based on the *Highway Capacity Manual* methodology, was used. With a roundabout, both intersections of Old Redwood Highway/Henry Street-Charles Street and Old Redwood Highway/La Plaza South would be expected to operate at LOS A both now and under future conditions. Also, minimal queuing would be expected to occur at either intersection, however, the northbound queuing at the intersection of Old Redwood Highway/East Cotati Avenue would be expected to extend into the roundabout at Old Redwood Highway/La Plaza South. This queuing should not impact flow of traffic in the southbound direction. A summary of the roundabout traffic operation is included in Table 1 and copies of the calculations are provided in Appendix B.

Median Design Alternatives.

Several design alternatives were considered that will enhance the center area on Old Redwood Highway that has recently been delineated with two double yellow center lines. The double-double yellow center line prohibits U-turns and left turns as defined by the *California Vehicle Code*. The area between the double yellow lines creates a 4-foot wide median island area. Several alternatives were considered that would enhance and reinforce this configuration.

A raised concrete median island was considered. The island would be constructed using a 4-inch high mountable curb with a 3-foot wide center of brick or paving stones. There would be a break in the median island at the two existing mid-block driveways which would provide a suitable opening to permit vehicle movements. In the event that emergency vehicles needed to traverse Old Redwood Highway at a time when

congestion blocked the street, the emergency vehicles would have to either straddle or travel on the wrong side of the median island. If police or fire trucks were responding to a call on Old Redwood Highway that required them to block the street, standard passenger vehicles would not have the ability to use the opposing lane to proceed.

An alternative design is the application of a colored pavement treatment in the area between the double yellow center lines. This alternative can be applied directly to the existing asphalt and comes in a range of colors such as blue, green, and red. The colored pavement treatment does not create a physical barrier to emergency vehicles or a tripping hazard to pedestrians making random street crossings outside of designated crosswalks. The pavement treatment could easily be modified or removed and would not restrict future designs. An example of this type of treatment has recently been used to enhance bicycle lanes on Lakeville Street in Petaluma.

Because of the ease installation, future design flexibility, and lack of adverse impacts on emergency vehicles, parking maneuvers, and pedestrian movements the applied pavement treatment is considered superior and is the alternative recommended for each of the three design options.

Recommendation:

The center 4-foot median should be flush with the existing pavement and be constructed with a colored traversable asphalt or concrete material and could be stamped with a paver or cobblestone pattern. The existing double-double yellow striping pattern should remain to restrict U-turns and left-turns.

Review and Analysis

Preliminary Roundabout Design

A design evaluation discussion for both intersections is included in Appendix C. Preliminary design evaluations suggest that a 90-foot small-urban roundabout would work well in either location. The preliminary roundabout design is shown in Figure 2A (See Powerpoint slides) for Old Redwood Highway/La Plaza South and Figure 2B (See Powerpoint slides) for Old Redwood Highway/Henry Street-Charles Street. These figures show the roundabout in relationship to other important features such as buildings, crosswalks, parking and sidewalks.

Finding: Preliminary design evaluations suggest that a 90-foot small-urban roundabout would work well in either location and both would operate at LOS A.

The proposed roundabouts at both locations were tested to determine the adequacy to accommodate truck traffic. The designs proposed can accommodate the SU-class design vehicle within the paved roadway area of the roundabout. The SU-class Design Vehicle is a single unit truck and includes such vehicles as fire engines, and refuse collection and delivery trucks. The larger WB-50 design vehicle is a large 60-foot single trailer truck combination. The WB-50 design vehicle places the highest design demands upon the roundabout and smaller more maneuverable vehicles can be accommodated easily. Figure 3 (See Powerpoint slides) shows the truck turn paths for the La Plaza South and Henry Street-Charles Street intersections with Old Redwood Highway. The potential does exist for the occasional interstate commerce class truck. These trucks are the largest vehicles which can be anticipated to use the Old Redwood Highway corridor. This class of vehicle was tested to insure that the design roundabout will accommodate this class of vehicle. The class of interstate truck

is not anticipated nor encouraged to use Henry and Charles Streets. Figure 4 (See Powerpoint slides) shows the truck turn path of this class of vehicle at the roundabout at Old Redwood Highway and Henry-Charles Streets.

The installation of roundabouts at either location will require the relocation of existing crosswalks to 20 feet back from the intersection. This will result in the loss of several parking spaces at each approach to either intersection. The removal of the existing mid-block crossing on Old Redwood Highway was considered as a method of recovering several on-street parking spaces. Observations suggest that pedestrians cross Old Redwood Highway throughout this section of street and that pedestrians are choosing the most direct path. In addition, the installation of a median refuge island will encourage random crossings. However, the City is currently in the process of creating a public parking lot behind the buildings on the northwest side of the street. Pedestrians walking from these new parking spaces would be lead directly to this mid-block crossing. Its removal is therefor not recommended.

Finding: Roundabouts at either study intersection will result in the loss of several parking spaces on each approach.

Option 1 - Install One Roundabout

Option 1 explores the potential to install one roundabout at either Old Redwood Highway/La Plaza South or Old Redwood Highway/Henry Street-Charles Street. The following issues were considered in determining the most appropriate location for one roundabout.

- Roundabouts are expected to operate at LOS A now and into the future at both locations.
- Old Redwood Highway/Henry Street-Charles Street experiences significant delay due to the all-way stop.
- Old Redwood Highway/La Plaza South has minimal traffic delay.
- A roundabout at Old Redwood Highway/La Plaza South was envisioned as part of a larger system
 which includes the closer of the Old Redwood Highway/East Cotati Avenue intersection.
- A roundabout at either location would facilitate parking maneuvers in the downtown core.
- A roundabout at either location would act as a gateway and traffic calming device.

Given that the intersection of Old Redwood Highway/Henry Street-Charles Street would benefit most from an operational standpoint, it is recommended that this be the location for the single roundabout.

Recommendation: If one roundabout is to be installed, the location should be the intersection of Old Redwood Highway/Henry Street-Charles Street given that it would benefit traffic operations more significantly than La Plaza South.

Option 2 - Install Two Roundabouts

Option 2 explored the opportunity to develop two roundabouts, one at Old Redwood Highway/Henry Street-Charles Street and one at Old Redwood Highway/La Plaza South. The two roundabout alternative will improve access to parking on Old Redwood Highway between La Plaza South and Henry-Charles Streets. Motorists looking for parking spaces and finding none on their side of the street can easily use the roundabout to make a U-turn and access available parking on the opposite side.

Although vehicle backups into the roundabout from the northbound approach to Old Redwood Highway/ East Cotati Avenue will occur during peak periods, these backups will not impair southbound flows. Traffic flows into the roundabout from La Plaza South onto Old Redwood Highway northbound are light (5 vehicles in p.m. peak hour) and only minor impacts are to be expected.

Option 3 - Keep Existing Traffic Control

Option 3 is based on the assumption that current traffic controls remain with only the addition of the median treatment. Under these conditions, travel speeds would be expected to decrease, however, the existing LOS D conditions at Old Redwood Highway/Henry Street-Charles Street are expected to remain and deteriorate into the future.

Comparison of Options

Based on the evaluation presented in this report, a comparison was made of the three design options. A summary of the comparison is shown in Tables 2 which presents operational areas on which the three options might have an impact. The ability of each design option to provide benefit in each of these areas was termed as "best," "better," "good," or "no change."

Table 2
Design Option Comparison

Improvement Areas	One Roundabout	Two Roundabouts	Current Control
Delay/LOS	Best	Best*/No**	No change
Parking Maneuvers	Good	Best	No change
Vehicular Safety	Better	Best	No change
Pedestrian/Bike Safety	Better	Best	No change
Air Quality	Good	Good	No change
Aesthetics	Better	Best	No change
Travel Speed	Better	Best	Good

^{* -} Best for the intersection of ORH/Henry Street-Charles Street

Finding: Not considering the cost of each option, Design Option 3, Build Two Roundabouts, would result in the most improvement to traffic operation in the downtown core. Although the roundabout at Old Redwood/La Plaza South would not have any benefit from a Level of Service or delay standpoint, it would benefit parking maneuvers and have a traffic calming affect at this gateway to the core area.

Also, a comparison was made between intersection control for the Old Redwood Highway/Henry Street-Charles Street intersection. Options included the existing 4-way stop, a roundabout and a traffic signal. A summary

^{**-} No change for the intersection of ORH/La Plaza South

of the intersection levels of service are shown in Table 3 and a comparison matrix is shown in Table 4.

Table 3
Summary of Intersection Level of Service
With Traffic Control Options

I	ntersection	F	Existing (Conditions	S	Futi	ıre*
	Approach	A.M.	Peak	P.M.	Peak	P.M.	Peak
L		Delay	LOS	Delay	LOS	Delay	LOS
1	Old Redwood Highway/Henry StCharles St.						
	Existing 4-way Stop	7.7	В	22.6	D	75.0	F
	Roundabout	0.6	\boldsymbol{A}	0.7	A	1.3	A
	Traffic Signal	0.1	A	5.6	В	11.3	В

Table 4
Design Option Comparison

Improvement Areas	Existing 4-way stop	Roundabout	Traffic Signal
Delay/LOS	LOS D-F	LOS A	LOS B
Parking Maneuvers	Least gaps	More gaps	Most gaps
Vehicular Safety	No change	Best	No significant change
Pedestrian/Bike Safety	No change	Better	No significant change
Air Quality	Worst	Best	Better
Aesthetics	No change	Best	?????
Travel Speed	No change	Slower	Increase
Corridor Travel Time	No change	Decrease	Better

Other Safety Issue

Currently, there are perpendicular parking spaces on Old Redwood Highway in front of Frank's Mini Mart, south of Henry-Charles Streets. Given that these spaces require vehicles to back into both lanes of traffic when this traffic is leaving toward the north, the perpendicular configuration of the spaces present a public safety issue.

The perpendicular parking spaces on Old Redwood Highway in front of Frank's Mini Mart should be converted from 90-degree to 45-degree in order to improve
public safety.

Presentation and Response to Comments

Presentation slides used for the various public meetings in Cotati are shown in Appendix D along with response to various questions which were posed by the City Council.

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Zack Matley

Administration:

Debbie Dunn

Report Review:

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Traffic Counts:

Amy Cordtz

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Department of Transportation

Trip Generation, 6th Edition, Institute of Transportation Engineers,

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Existing PM		Ţ	Tue Aug 29,	2000 09	:41:58		Page	5-1
	Cotati	PM Peak	Hour - Dwntown City	isting proveme Cotati	Conditions nts Traffic	Study	9 9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	:
***************************************	1994 HCM	Level Operat	f Service ons Metho	Computa d (Base	tion Re Volume	port Alternative)	(e)	
ters ****	#3 01d	edwood ******	ay/E ****	otati- *****	Sierra *******	* *	******	* *
Cycle (sec): Loss Time (sec)	ec):	100 8 (Y+R 48	# 4 sec)	Critica c) Average Level O	l Vol./Cap. Delay (sec/ f Service:	(X):	0.697 19.5	
t ::	rth	Bound	South B	ound - R	East B	ind R	st T	Bound - R
ם שמם	Prote	otected Include 0 0 0	Protecte includ	otected Include 0 0	Protected Include 0 0 1 1	0	Protected Include 0 0 0 1 1	4 .
Volume Modul Base Vol:	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	t Da	6 Aug 2	V	0 - 5:30 73 226	i .	29 15	33
Initial Bse:			373 34		3 2 5		29 15	333.0
PHF Adj:	40	. 0	0.8	- 0		0.94	0.0	0.91
Reduct Vol: Reduced Vol:	0 O Q	480 0 0 480 7	5	ດ ທ	x 0 a	y O w	-	o v
	.00.	-	001	0 1.00 5 1.05 8 62	0 1 1 8	1.00	† ;; ; [1.00
Saturation F Sat/Lane:	 ow Modu 1900 19	1 . 61	900 190	190	900 190	l o	900 190	1900
Adjustment: Lanes:	.95 1.	00 1.00 97 0.03	0 5	8 0.98	95 1	1.00	0.95 1.00	0.85
Final Sat.:	5 37		805 324	8 4	805 369		805 190	1615
pa 1/1	lysis 0.00	Module: 0.13 0.13	0.24 0.13	3 0.13	0.04 0.07	0.07	0.02 0.09	0.23
/Cyc	010.	0.1	.34 0.5	0.5	.06 0.3	•	.08 0.3	w.
we/cap y/veh:	9 0	6.3 26.3	9.8	0.60) H	16.6	28.0 16.2	20.9
User DelAdj: AdiDel/Veh:	.00 1 2.6 2	1.0	.00 1.0	1.0	.00 1.0	• 60	00 1.0	٥ :
E *	* * * *	* * * *	17 1	* * * * *	* * * * * * * * * * * * * * * * * * * *	· - *	2 ***	, *

RANGE WERE THE THE TO THE RESERVE THE SECOND STATES

Old Redwood Highway/Henry St-Charles St. AM Peak Hour - Existing Conditions Intersection ID:

Roundabout

Table S.14 - SUMMARY OF INPUT AND OUTPUT DATA

Lane	Arriv	al El	Arrival Flow (veh/h)	h/h)	;	Adj.	Eff Grn	Deg	Aver.	958	Shrt
0	ы	Ð	ĸ	Tot	> ¥•	Basic Satf.	(secs) 1st 2nd	Sa X T	Delay (sec)	Quene (ft)	Lane (ft)
West:	Eastb 18	ound 14	Eastbound Henry St 18 14 18	st S0	9	1	 	0.055	2.0	6	
	18	14	18	20	9			0.055	2.0	6	!
South: 1 LTR	1	orthbour 15 311	Northbound ORH 15 311 65	391	7		 	0.210	0.1	33	
	15	311	65	391	7		 	0.210	0.1	33	
East:	Westb 98	ound 21	Westbound Charles St 98 21 15 134	134.	7			0.137	1.9	22	1 ! !
	86	21	15	134	7		 	0.137	1.9	22	!
North: 1 LTR	;	hboun 272	Southbound ORH 13 272 10	295	2		! ! ! ! !	0.200	0.5	32	
	13	272	10	295	2			0.200	0.5	32	!
ALI, VE	VEHICLES	S		Tot Arv. 870	* A Z	·		Max X 0.210	Aver. Delay 0.6	Max Queue 33	# #

Total flow period = 60 minutes. Peak flow period = 15 minutes.

Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

Values printed in this table are back of queue.

Old Redwood Highway/Henry St-Charles St AM Peak Hour - Existing Conditions Intersection ID: Roundabout

* CHA-1 *

* CHA-1 *

Table S.15 - CAPACITY AND LEVEL OF SERVICE (HCM STYLE)

Mov No.	Mov Typ	Total Flow	Total Cap.	Deg.	Aver. Delay	LOS
	_	(veh /h)	(veh /h)	Satn (v/c)	(sec)	
West: Ea	stbound	Henry St 50	t 914	0.055	2.0	Æ
		20	914	0.055	2.0	A
South: Na 32 LTR	Northbound R	1 ORH 391	1859	0.210*	0.1	Æ
		391	1859	0.210	0.1	Æ
East: We. 22 LTR	stbound	Charles 134	st. 981	0.137	1.9	Æ
		134	981	0.137	1.9	Æ
North: S	Southbound R	ORH 295	1476	0.200	0.5	Ą
		295	1476	0.200	0.5	4
ALL VE	VEHICLES:	870	5230	0.210	9.0	Æ
INTERS	INTERSECTION:	870	5230	0.210	0.6	4

Level of Service calculations are based on average control delay including geometric delay (HCM criteria), independent of the current delay definition used. For the criteria, refer to the "Level of Service" topic in the aaSIDRA Output Guide or the Output section of the on-line help. Maximum v/c ratio, or critical green periods

* CHP-1 *

Old Redwood Highway/Henry St-Charles St PM Peak Hour - Existing Conditions Intersection ID:

Committee of the commit

Roundabout

Table S.14 - SUMMARY OF INPUT AND OUTPUT DATA

Lane	Arriv	al F	Arrival Flow (veh/h)	eh/h)	777	Adj. E	Eff Grn	Deg	Aver.	958	Shrt
2	н	Ħ	α	Tot	> L		(secs) 1st 2nd	sac x	(sec)	Quene (ft)	Lane (ft)
West:	Eastb 22	ound 24	Eastbound Henry St 22 24 24	St 70	4	! ! ! ! !	 	0.082	2.8	13	
	22	24	24	70	4	; ; ; !	! ! !	0.082	2.8	13	
South: 1 LTR	1	hbour 558	Northbound ORH 15 558 170	743	2	i 	 	0.410	0.3	77	
	15	558	170	743	7		! } ! !	0.410	0.3	77	
East: 1 LTR	Westb 79	ound 19	Westbound Charles St. 79 19 31 129	as St. 129	2	i i i i	; ; ; ; ; ;	0.162	3.8	28	
	79	13	31	129	7	; ! ! !		0.162	3.8	28	
North: 1 LTR	1	Southbound 27 389	d ORH	456	7	; ; ; ; ;	; ! ! ! ! !	0.267	0.3	4 4	; !
	27	389	0.4	456	2		; ; ; ; ;	0.267	0.3	44	
ALL VE	VEHICLES	ဟု		Tot Arv. 1398	#A HZ		 11 11 14 15 16 16 16 16 16 16 16 16 16 16 16 16 16	Max X 0.410	Aver. Max Delay Queue	Max Queue 77	0 t B

Total flow period = 60 minutes. Peak flow period = 15 minutes.

Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

Values printed in this table are back of queue.

Old Redwood Highway/Henry St-Charles St PM Peak Hour - Existing Conditions Intersection ID:

* CHP-1 *

Roundabout

Table S.15 - CAPACITY AND LEVEL OF SERVICE (HCM STYLE)

WO V	Mov	Total	10+0	; ; ; ; ; ; ; ; ;	1010	1 0
No.	Typ	Flow	Cap.	of.	Delay	3
		(veh	(veh	Satn		
i !		/h)	(h)	(a/c)	(sec)	
West: 1	Eastbound LTR	Henry St 70	t 851	0.082	2.8	ď
		70	851	0.082	2.8	4
South: 32 L7	1: Northbound LTR	id ORH 743	1811	0.410*	0.3	4
		743	1811	0.410	0.3	A
East: F 22 LT	Westbound	Charles 129	St. 794	0.162	3.8	m
		129	794	0.162	3.8	Д
North:	: Southbound LTR	d ORH 456	1709	0.267	0.3	Æ
		456	1709	0.267	0.3	4
ALL VE	VEHICLES:	1398	5165	0.410	0.7	A
INTERS	INTERSECTION:	1398	5165	0.410	0.7	ď

average control delay including geometric delay (HCM criteria), independent of the current delay definition used. For the criteria, refer to the "Level of Service" topic in the aaSIDRA Output Guide or the Output section of the on-line help. Maximum v/c ratio, or critical green periods Level of Service calculations are based on

* LPA-1 *

Old Redwood Highway/La Plaza South AM Peak Hour - Existing Conditions Intersection ID:

* LPA-1 *

Roundabout

Table S.14 - SUMMARY OF INPUT AND OUTPUT DATA

Lane Ar	Arrival Flow (veh/h)	ОМ О	veh/h)	717.4		Adj. Eff Grn	Deg	Aver.	Aver. 95%	
	I H	ĸ	R Tot			Satf. 1st 2nd	g ×	(sec)	(sec) (ft)	(ft)
West: 1 LIR	West: Eastbound La Plaza South LTR 3 2 14 19 1	nd La Pl: 2 14	aza South 19 16	th 16			0.021	1.4	8	!
	3 2	14	13	16		1 	0.021	1.4	9	1
South:	South: Northbound ORH IR 0 293 13	d ORH 13	306	2	; ; ; ; ;	 	0.164	0.0	24	
	0 293 13	13	306	7		 	0.164	0.0	24	!
North: 1 LT	North: Southbound ORH LT 17 283 0	d ORH	300	2	! ! !	 	0.161	0.0	0	
	17 283	0	300	7	: ! ! !	 		0.0	0	!
ALL VI	ALL VEHICLES		Tot Arv. 625	# >H	# # #	两 内角 计等级 建 结	Max X 0.164	Aver, Max Delay Queue 0.1 24	Max Queue 24	H H H
Totol .	机动物机械等级物物等级设施的机械的现在分词 计分子 医二甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基			# # #			****		H H H H	# #

Total flow period * 60 minutes. Peak flow period = 15 minutes.

Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

Values printed in this table are back of queue.

Old Redwood Highway/La Plaza South
AM Peak Hour - Existing Conditions
Intersection ID:
Roundabout
Table S.15 - CAPACITY AND LEVEL OF SERVICE (HCM STYLE)

ď, K æ œ K ď ď K 0.1 0.0 0.0 0.1 0.0 0.0 Aver. Delay (sec) Satn (v/c) 0.164* Deg. of 0.161 4626 0.164 0.021 0.021 0.164 0.161 0.164 West: Eastbound La Plaza South 12 LTR 19 895 Mov Mov Total Total No. Typ Flow Cap. (veh (veh /h) 1863 1867 4626 895 1867 1863 300 625 13 306 625 South: Northbound ORH 32 TR 306 North: Southbound ORH 42 LT 300 ALL VEHICLES: INTERSECTION:

Devel of Service calculations are based on average control delay including geometric delay (HCM criteria), independent of the current delay definition used. For the criteria, refer to the "Level of Service" topic in the aasIDRA Output Guide or the Output section of the on-line help. Maximum v/c ratio, or critical green periods

* LPP-1 *

Old Redwood Highway/La Plaza South PM Peak Hour - Existing Conditions Intersection ID:

Roundabout

Table S.14 - SUMMARY OF INPUT AND OUTPUT DATA

Lane	Arriv	Arrival Flow (veh/h)	> 1	eh/h)	717	Adj.	Adj. Eff Grn	Deg	Aver.	95%	Shrt
	ı	E	æ) Li	Satf.	Satf. 1st 2nd	א א ב	(sec)	(sec) (ft)	(ft)
West:	Eastl 6	Eastbound La Plaza South 6 2 31 39	a P1	aza Sou 39	th 8			0.043	2.0	7	1
	ω	2	31	39	8	i ! ! !	f f f f l l	0.043	2.0	7	!
South: 1 TR	North 0	South: Northbound ORH TR 0 504 38	ORH 38	542	7	: ! ! ! !	1 1 1 1 1 1 1 1	0.290	0.1	47	
	0	504	38	542	2	; ; ; ; ;	 	0.290	0.1	47	
North: 1 LT		Southbound ORH 17 371 0	ORH O	388	2	; ; ; ; ; ;	 	0.208	0.0	0	
	17	37.1	0	388	2] 2 3 1 1 1	0.208	!	0	
ALL VEHICLES	HICLE	ន្ទ		Tot Arv. 969	# H 7			Max X 0.290	Aver. Delay Q	Aver. Max Delay Queue 0.1 47	# # #
Total f	low r	Total flow period * 60 minutes.	09	minute		Peak f.	Peak flow period = 15 minutes	d = 15 m	minutes.	3	N H H

Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

Values printed in this table are back of queue.

Old Redwood Highway/La Plaza South PM Peak Hour - Existing Conditions Intersection ID:

* LPP-1 *

Roundabout

Table S.15 - CAPACITY AND LEVEL OF SERVICE (HCM STYLE)

Mov No.	Mov	Total Flow (veh	Total Cap. (veh	Deg. of Satn	Aver. Delay	LOS
West: E	Eastbound ITR	La Plaza 39		0.043	2.0	Æ
	į	39	868	0.043	2.0	¥
South: 32 TR	South: Northbound 32 TR	d ORH 542	1868	0.290*	0.1	B
	i	542	1868	0.290	0.1	<u>a</u>
North: 42 LT	Southbound	4 ORH 388	1870	0.207	0.0	A
	i	388	1870	0.207	0.0	A
ALL VE	ALL VEHICLES:	696	4635	0.290	0.1	A
INTERS	INTERSECTION:	696	4635	0.290	0.1	A

Level of Service calculations are based on average control delay including geometric delay (HCM criteria), independent of the current delay definition used. For the criteria, refer to the "Level of Service" topic in the asSIDRA Output Guide or the Output section of the on-line help. Maximum v/c ratio, or critical green periods

		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1					1		!
	Cotati	PM Ped Transit	eak Hour t Village City	ຸດວ	Future C pecific f Cotati	Condition Plan T.	ions Traffic	Study	>1	
**************************************	<pre>1994 HCM 4-Way Stop Method (Base Volume Alternative) ************************************</pre>	Level (4-way (*******	Of Service C Stop Method ************************************	Service Control Method	Omputa (Base *****	Of Service Computation Report Stop Method (Base Volume Alte ************************************	eport Altern ******	**************************************	* :	*
Cycle (sec): Loss Time (sec) Optimal Cycle:	ec):	1 0 (Y+R 0	4 5000	Sec) A	Critica Average Level O	Critical Vol./Cap. (X): Avorage Delay (sec/veh) Level Of Service:	/Cap. (sec/	X): eh)	k -	245 5.0 F
Approach: Movement:	North L -	ound - R		outh Bound	und - R	1 1 1 1 1 1 1	East Bound		West	Sound - R
Control: Rights: Lanes:	stop Sign Include	¦ °	st	top Sign Include	gn de 0 0	st.	Stop Sign Include 0 11 0	gn de 0 0	Stop Sig Includ	Sign lude 100
Volume Modul	e: pro	ad fut: 232	- H	610	63	23	32	32	108 24	
Growth Adj: Initial Bse:	888	1.00		1.00	1.00	23	32	1.00	1.0	
PHF Adj:	0.90 0.90		10	0.90	0.90		0.90	0.90	7.90 0.90 7.90 0.90	0.90
Reduct Vol:				0 0	0 0	200	808	808	1 (30
Neurceu voi: PCE Adj:			1.0	1.00	1.00		1.00	1.00	1.00 1.00	ч
MLF Adj: Final Vol.:	1.00 1.00 22 670		1.00	1.00	1.00	•	1.00 36		1.0	0 1.00
Saturation F	-	 e:				-		Ī		1-
	763 763	3 763	789	789	78	96				2 262
Adjustment: Lanes:			00.0	1.00	1.00	1.00	37	1.00	1.00 1.00	⊢ ⊂
Final Sat.:	18 538		•	671	, w	25	•	•	172 35)
Capacity Analysis	lysis Modul	ule:		-		,		- 5		
Crit Moves:	• •	;	•	1 * ·		* *	70.		***	·
Approachv/s: Delay/Veh:	~1	5 3 113.4	46.5	1.01	46.5		1.02 48.4	48.4		
Delay Adj:	00.	1.0	1.00	1.00	1.00	1.00		1.00	1.00 1.00	
AdjDel/Veh:	113.4 113	3 113.4	46.5	46.5	46.5		48.4	48.4		2 14.2
AndroachDel:	113			46 5	.			**	ວ ວຸ້	
Approachber. Delay Adj:	1.00	* 0		1.00		. · •	1.00		14.2	N C
AppradjDel:	113.4	4		46.5		-	48.4		14.2	•

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Future PM		Tue Aug	29, 200	2000 10:	10:50:42			Page	4-1
	PM Cotati Trans	PM Peak Hour - Transit Village City	Spe of	Future Co pecific F f Cotati	Conditions : Plan Traffic	fic Study	γt		1 1 1 1
199 ***********************************	Level	Level Of Service Computation Rel Unsignalized Method (Base Volume ************************************	Of Service Computation lized Method (Base Vol ************************************	mputat (Base *****	Level Of Service Computation Report Unsignalized Method (Base Volume Alternative) ************************************	ort Alternative) ********	!ve) ****	*	*
Average Delay	**************************************	9.0	* -	* * * * *	Worst Case	r****** Level Of	******** [Service:	* * *	* O · * · * ·
Approach: Movement:	North Bound	R L	South Bound	nd R	East L - T	East Bound	I We	West Bo	Bound
Control: Rights: Lanes:	Uncontrolled Include 0 0 0 1 0	- 0	Uncontrolled Include	e d	Stop Sign Include	op Sign Include	Sto	op Si Inclu	gn de 0 0
Volume Module: Base vol: Initial Bse: User Adj: 1 PHF Adj: 0 PHF Volume: Reduct Vol: Final Vol:	projected 603 100 100 100 100 100 100 100 100 100 00	future 55 30 0.00 1.00 1.00 0.90 0.90 0.90 0.90 0.9	671 1.00 671 1.00 0.90 746 0	1.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	0 0 1.00 0 1.00 0 0.90 0 0.90 0 0.90 0 0.90	1.000.000000000000000000000000000000000	0000000	1.000.1
Adjusted Volume Grade: \$ Truck/comb: \$ Truck/comb: FCE Adj: Cycl/Car PCE: Trck/cmb PCE: Adj Vol::	ume Module: 0% 1	00 1.1	0 % XX X		0% XXXX XXXX 1.10 1.10 XXXX 1.10 1.10	0%		0\$ xxxx x xxxx x 0 1.10 xxxx x xxxx x	* xxxx xxxx xxxx xxxx xxxx xxxx xxxx x
Critical Gap MoveUp Time: Critical Gp:	Module: KXXXX XXXX XXX KXXXX XXXX XXX	xx 2.1 xx 5.0	× × × × × ×	XXXXX	3.4 xxxx 6.5 xxxx	2.	XXXX	XXXX XXXX	XXXXX
Capacity Module: Cnflict Vol: xxx Potent Cap.: xxx Adj Cap: xxx Move Cap.: xxx	XXX XXX X XXX XXX X XXX XXX X	xx 731 xx 769 xx 1.00 xx 1.00	× × × × × × × × × × × × × × × × × × ×	× × × × × × × × × × × × × × × × × × ×	1479 xxxx 147 xxxx 0.92 xxxx 135 xxxx	74 58 1.0 58	XXXXX XXXXX	X X X X X X X X X X X X X X X X X X X	XXXXX XXXXX
Level Of Serstopped Del:: LOS by Move: Movement: Shared Cap.: Shrd StpDel:: Shared LOS:	Service Module: Del:xxxx xxxx xxxx dove:	** * * 4 . 9	XXX * * LITR XXXX XXXX	X X X X X X X X X X X X X X X X X X X	29.1 xxxx *	6. XXXX ***	' × ' ××	1	XXXXX * * XXXXX XXXXXX

##CM ##################################	3 1 4 *	Pha of	T T as	, ,	Study			
######################################	el Of Serv rations Me ********* ati-W Sier		tati	rarric	1		1	
##3 ORH/E Cote ************************************	ati-W Siez *******	(1) -k	Smputa (Base	Computation Report (Base Volume Alternative)	eport Alter	rnative ******	(a) ************************************	* * * * * * *
: 100 ***********************************			***	*********	* * * * *	* * * *	*****	****
North Boun L T D L Protected 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 0 1 0 0 1 33 537 1 00 1.00 1 0 0 0 0 0 0 37 597 0 0 0 1 1.00 1.00 1 1 1.00 1.00 1 1 1.00 1.00 1 1 2 597 0 0 0 0 0 0 0	+R = 4	Sec) Av	Critical Average l Level Of	^ :	• 6	(X): 'veh):	1.016 37.7 D	
Protected Include 0 0 0 1 1 1 0 1 1 1 1 0 1 1 1 1 1 1 1	R S I	· 🗀	κ .	K	t Bound T -		West Boun	Bound - R
: projected 1.00 1.00 1 33 537 1.00 1.00 1 0.90 0.90 0 0 0 37 597 0 0 37 597 1.00 1.00 1 1.00 1.00 1 37 597 37 597 37 597 37 597	0 1	rotected Include 0	o o	Pro Pro 1 0	Protected Include 0 0 0 1 1	000	Protected Include 0 0 1 1	ted or 1 0
597 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	future 43 549	602	142	149	349	76	23 275	485
597 597 597 1.00 1 597 597	٠ -	602	142	14.9	349	•	233	
597 1.00 1 1.00 1 597 597	90 0.90	06.0	0.90		388	0.90		
1.00 1 1.00 1 597	0 0 48 610	0	158	0 166	388	84	26 306	
dule:	.00 1.00 .00 1.00 48 610	1.00 1.00 669	1.00 1.00 158	1.00 1 1.00 1 166	388	1.00	300	1.00 1.00 539
900 1900 1 .95 0.99 0	0	1900	1900	900	1900	1900	1,900 1,900 0.95 1.00	1900 1900 0.85
3482	280 1805	1.62	5	1.00 1 1805 3	.64	0.36 656	1805 1900	1.00
sis Mo .02 0.	17 0.34	0.22	0.22	0.00.0	.13	0.13	0.01 0.16	0.33
0.17 0	0 71	0.46		60.	.38	0.38	04 0.3	ω, c
4.1 58.6 5	79.	. 5.	12.4	2 60	4.5	14.5	34 0.4 .1 17.	1.02
1.00	00 1. .6 54	1.00		.00 1	O 10	1.00	• 1	1.00
2 29	2 25	21	S * * *	****	14	۳ * * *	1 12	22

* CHP-1F *

Old Redwood Highway/Henry St-Charles St PM Peak Hour - Future Conditions (Existing Road Network) Intersection ID:

* CHP-1F *

Roundabout

Table S.14 - SUMMARY OF INPUT AND OUTPUT DATA

			1								
Lane	Arrival Flow (veh/h)	11 FJ) MO	eh/h)	1	Adj.	1 144	Deg	Aver.		Shrt
	ij	₽	α,	Tot	> □ *	sasic Satf.	(secs) 1st 2nd	Sat x	Delay (sec)	Quene (ft)	
West:	Eastbound Henry St 26 36 36	und 1	Henry 36	.st 98	(N)	1 1 1 1 1	; ; ; ; ; ; ;	0.163	6.4	27	
1	26	36	36	96	9	! ! ! ! !		0.163	6.4	27	
South: 1 LTR	Northbound ORH 23 670 258	boun(670	d ORH 258	951	2	! ! ! !	; ; ; ; ; ; ; ;	0.551	0.5	124	
	23	670	258	951	2	 		0.551	0.5	124	-
East: 1 LTR	Westbound Charles St 120 27 36 183	und C	Charle 36	es St. 183	2		: ! ! ! ! !	0.263	5.3	46	
	120	27	36	183	2	 	: : : : : : :	0.263	5.3	46	}
North: L LTR	South	bounc 678	1 ORH	767	2		: 	0.503	0.8	103	
	49	678	70	797	2			0.503	0.8	103	
ALL VI	ALL VEHICLES			Tot Arv. 2029	H & H	# # # # #	河	Max X 0.552	Aver. Delay 1.3	Max Queue	B B B
otal 1	Cotal flow period = 60 minutes.	riod	. 60	minute	Ħ	Peak fi	Peak flow period = 15 minutes	======================================	minutes	3.	# #

41 LIOW PELLOG * 60 MINUTES. PEAK ILOW PELLOG * 15 MINUTES.

Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanss.

Values printed in this table are back of queue.

Old Redwood Highway/Henry St-Charles St PM Peak Hour - Future Conditions (Existing Road Network) Intersection ID:

Roundabout

Table S.15 - CAPACITY AND LEVEL OF SERVICE (HCM STYLE) ros М 6.4 6.4 Delay (sec) Deg. of Satn (v/c) 0.163 0.163 Total Total Flow Cap. (veh (veh /h) /h) 602 Cap. (veh 602 -----West: Eastbound Henry St 12 LTR 98 86 Mov Typ Mov No.

ď ď മ æ ď ø ď 0.5 1.3 1.3 0.5 5.3 5.3 9. 9. 0.552* 0.263 0.263 0.503 0.503 0.552 0.552 0.552 4606 969 4606 969 1583 1583 1724 951 1724 East: Westbound Charles St. 22 LTR 183 69 797 183 INTERSECTION: 2029 North: Southbound ORH 42 LTR 797 ALL VEHICLES: 2029 South: Northbound ORH 32 LTR 951

Level of Service calculations are based on average control delay including geometric delay (HCM criteria), independent of the current delay definition used.

For the criteria, refer to the "Level of Service" topic in the asSIDRA Output Guide or the Output section of the on-line help. Maximum v/c ratio, or critical green periods

Old Redwood Highway/La Plaza South PM Peak Hour - Future Conditions (Existing Road Network) Intersection ID:

Roundabout

Table S.14 - SUMMARY OF INPUT AND OUTPUT DATA

Ф	Arriva	Arrival Flow (veh/h)	۸ (ve	h/h)		Adj.	Eff Grn	Grn	Deg.	Aver.	958	Shrt
	ц	H	ж	R Tot	> □ *	Basic (secs) Satf. 1st 2nd	se 1st	cs) 2nd	x	(sec)	Delay Queue Lane (sec) (ft) (ft)	Lane (ft)
West:	Eastbo 12	Eastbound La Plaza South	a Pla 50	12a Sol 64	th 5		<u> </u>	 	0.093	5.3	17	!
	12	2	20	64	ß			; ; ;	0.093	5.3	17	!
South: Northbound ORH	North 0	670	ORH 61	731	2	: : : : :	t 1 1	 ! !	0.392	0.2	72	
	0	0 670	61	731	7	: : : : : :	! ! !		0.392	0.2	72	
North: 1 LT		Southbound ORH 34 746 0	ORH	780	2	: : : : :	! !	! ! ! !	0.418	0.0	0	!
	34	34 746	0	780	7			: :	0.418	1	0	!
ALL VEHICLES	HICLES	70	# # #	Tot Arv. 1575	# H 7			11 11 12 13 14	Max X 0.418	H .	Aver. Max Delay Queue 0.3 103	H Q H H

Total flow period = 60 minutes. Peak flow period = 15 minutes.

Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

Values printed in this table are back of queue.

Old Redwood Highway/La Plaza South PM Peak Hour - Future Conditions (Existing Road Network) Intersection ID:

Roundabout

Table S.15 - CAPACITY AND LEVEL OF SERVICE (HCM STYLE) œ В щ K < ø 5.3 0.3 Aver. Delay 5,3 0.0 0.0 0.5 (sec) Deg. of Satn (v/c) 0.418* 0.392 0.392 0.418 0.418 0.093 0.093 West: Eastbound La Plaza South 1865 4423 Total Total
Flow Cap.
(veh (veh
/h) /h) 689 1868 1865 1868 731 780 64 64 North: Southbound ORH 42 LT 780 ALL VEHICLES: 1575 South: Northbound ORH 32 TR 731 Mov Mov No.

Level of Service calculations are based on average control delay including geometric delay (HCM criteria), independent of the current delay definition used. For the criteria, refer to the "Level of Service" topic in the aaSIDRA Output Guide or the Output section of the on-line help. Maximum v/c ratio, or critical green periods

K

0.3

0.418

4423

INTERSECTION: 1575

Old Redwood Highway/La Plaza South PM Peak Hour - Future Conditions (ring junction) Intersection ID:

Roundabout

Table S.14 - SUMMARY OF INPUT AND OUTPUT DATA

Lane	Arrival Flow (veh/h)	Flo	<u>></u>	eh/h)		Adj.	Eff Grn	Deg	Aver.	%2°	Shrt
•	ı	! !	α.	R Tot	> ! \$	Satf.	Satf. 1st 2nd	s x	Delay Queue Lane (sec) (ft) (ft)	Queue (ft)	Lane (ft)
West: 1 TR	West: Eastbound La Plaza South TR 0 291 698 989	nd L 91	a P1 698	aza Sou 989	th 2	; ; ; ; ; ;	1 1 1 2 2 1 1 1	0.633	1.2	1.58	
	0 291 698	91	869	686	7		! ! ! !	0.633	1.2	158	
South: 1 LR	North 186	bound ORH 0 607	ORH 607	193	2		 	0.601	1.8	1.8 1.36	
	186	0 607	607	793	2	; ! !		0.601	1.8	1.8 1.36	
East: 1 LT	Westbound La Plaza South	nd L 29	a Pl	aza Sou 422	ith 2	! ! !	; ; ; ; ; ;	0.263	6.0	56	
	193 2	229	0	422	2	 		0.263	0.9	56	
ALL VE	VEHICLES			Tot Arv. 2204	* A Z		() () () () () () () () () () () () () (Max X 0.634	Aver. Max Delay Queue 1.4 158	Aver. Max Delay Queue 1.4 158	3 14 14 20

Total flow period = 60 minutes. Peak flow period = 15 minutes.

Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

Values printed in this table are back of queue.

Old Redwood Highway/La Plaza South
PM Peak Hour - Future Conditions (ring junction)
Intersection ID:
Roundabout

Table S.15 - CAPACITY AND LEVEL OF SERVICE (HCM STYLE)

LOS	m L	m	Ą	Æ	М	щ	М	М
Aver. Delay (sec)	1.2	1.2	1.8	1.8	6.0	6.0	1.4	1.4
Deg. of Satn (v/c)	0.634*	0.634	0.601	0.601	0.263	0.263	0.634	0.634
Total Cap. (veh /h)	za South 1561	1561	1320	1320	i"ā	1603	4484	4484
Total Flow (veh	La Plaza 989	939	d ORH 793	793	La Plaza 422	422	2204	2204
Mov Typ	Eastbound TR		: Northbound LR		Westbound		VEHICLES:	INTERSECTION:
Mov No.	West: 12 T		South:		East: 22 L		ALL	INTER

Level of Service calculations are based on average control delay including geometric delay (HCM criteria), independent of the current delay definition used. For the criteria, refer to the "Level of Service" topic in the aaSIDRA Output Guide or the Output section of the on-line help. Maximum v/c ratio, or critical green periods

Roundabout Design Evaluation

Design Evaluations

This section discusses the design alternatives for a roundabout at Old Redwood Highway and Henry/Charles Streets together with a roundabout at Old Redwood Highway and La Plaza South.

A successful design of a roundabout must consider the physical elements of the intersections. These elements include street width, right-of-way, existing pedestrian walkways, street furniture, street lighting, adjacent parking supply and buildings. Mobility of all users needs to be considered. Elements of mobility include vehicle type (small cars as well as large trucks) pedestrian activity, and bicyclists.

Roundabouts have several basic design elements which are summarized below to provide the reader with a basis for further discussions.

Inscribed Circle Outer diameter of the circle, outside-to-outside

Circulatory Roadway Width The roadway width for vehicles traveling around the central island

Mountable Truck Apron Outer portion of the central island used by large trucks. This portion of the

island has a unique but driveable surface.

Non-Mountable

Center Island Center of island not used by vehicles, typically landscaped

Splitter Island Small islands at the entry-exits to control speed and provide a pedestrian

refuge.

Landscape Buffers Landscape separate pedestrian/vehicle ativity and direct pedestrian

movements

Old Redwood Highway at Henry/Charles Streets

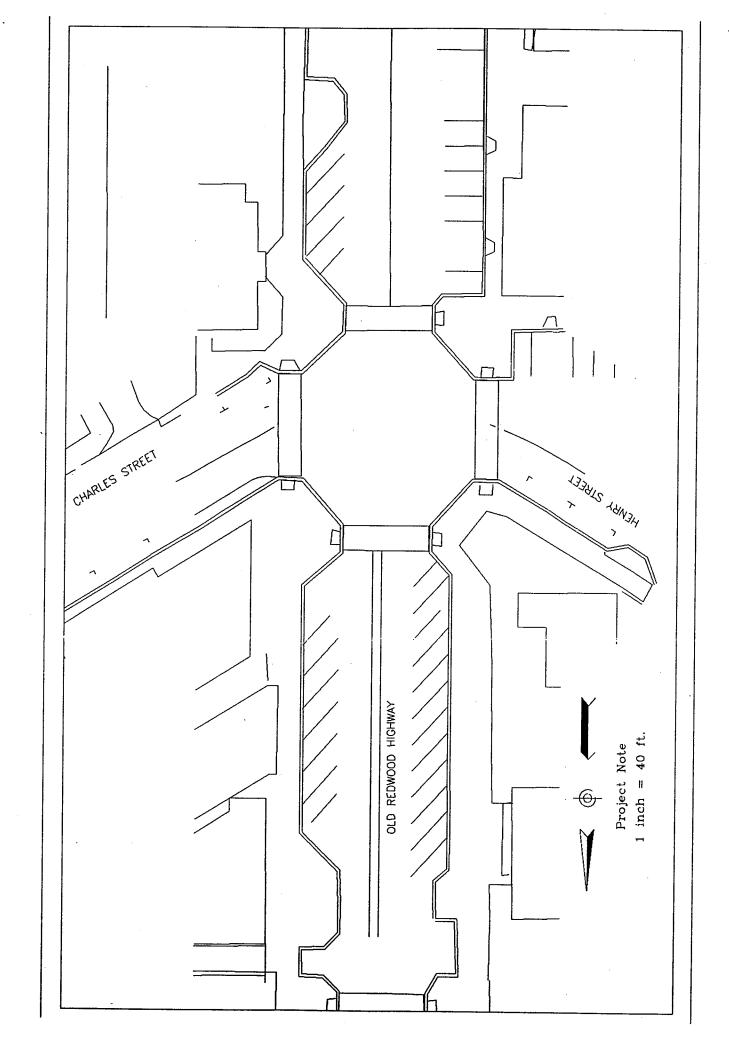
The initial design alternative for a roundabout at Old Redwood Highway and Henry/Charles Streets used as a base the existing intersection configuration to limit to the extent possible reconstruction of existing facilities. Under this alternative the diagonal measurement between curbs limits the size of the roundabout to diameter of 80 feet. The 80-foot inscribed circle falls within the Urban Compact Roundabouts design. The urban compact roundabouts are intended to be pedestrian and bicycle friendly. The inscribed circle determines the types of vehicle design vehicles that can be accommodated. The 80-foot inscribed circle will serve the turning requirements of single-unit trucks (fire engines, refuse collection, deliver) and buses. The central island is then determined by applying the circulatory roadway width within the inscribed circle. The central island and deflection angles are then checked to insure that appropriate vehicle speeds are maintained. The mountable center island is set by applying the turn requirements and swept path of the largest design vehicle anticipated at the intersection. The remaining portion of the central island which is not used by the largest anticipated vehicle can be landscaped.

Pedestrian crossings are provided at a point approximately one vehicle length from the entry to the roundabout. The existing crosswalks will need to be relocated and the existing pedestrian ramps at the corners will need to be removed to reduce pedestrian confusion.

Construction of the 80-foot roundabout will result is significant portions of the intersection curbs to be reconstructed to address pedestrian crossing relocations. An alternative design was considered that would to the extent possible work within the limits of the sidewalk areas to be reconstructed.

The relocation of the curbs within that portion of the sidewalk between the existing pedestrian ramps would

permit the inscribed circle to be increased to 90 feet from 80-feet by widening 5 feet on each corner. The 90-foot inscribed circle was then evaluated as described above. The 90-foot roundabout design is considered superior as it improves many design elements while not increasing significantly the area of construction, loss of parking and pedestrian walkways.

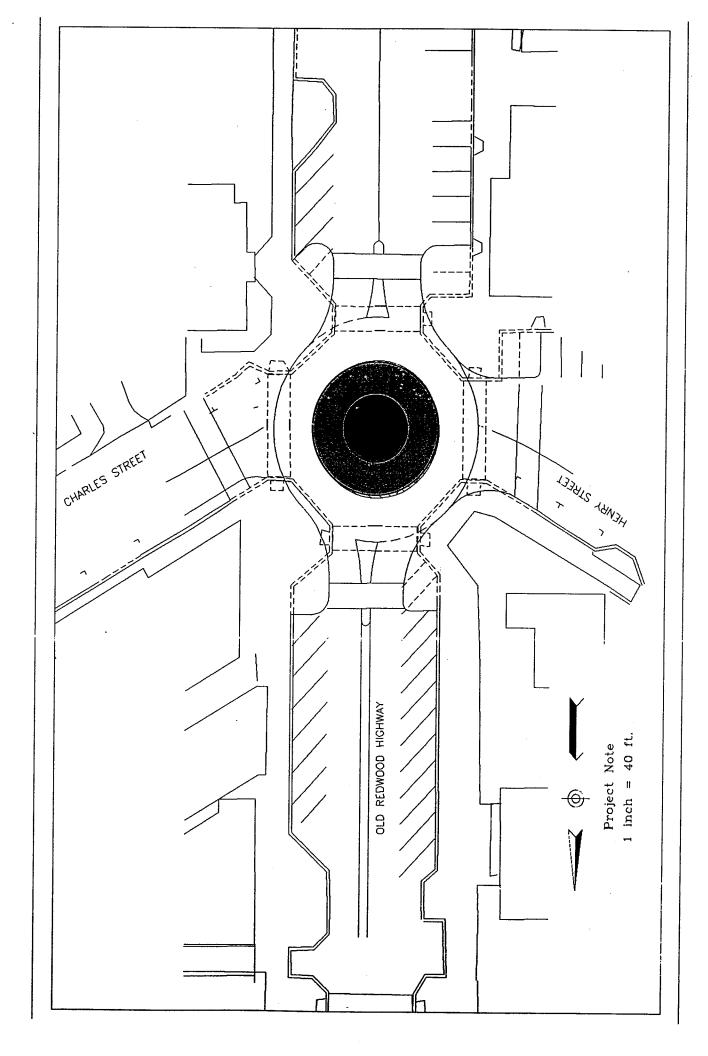


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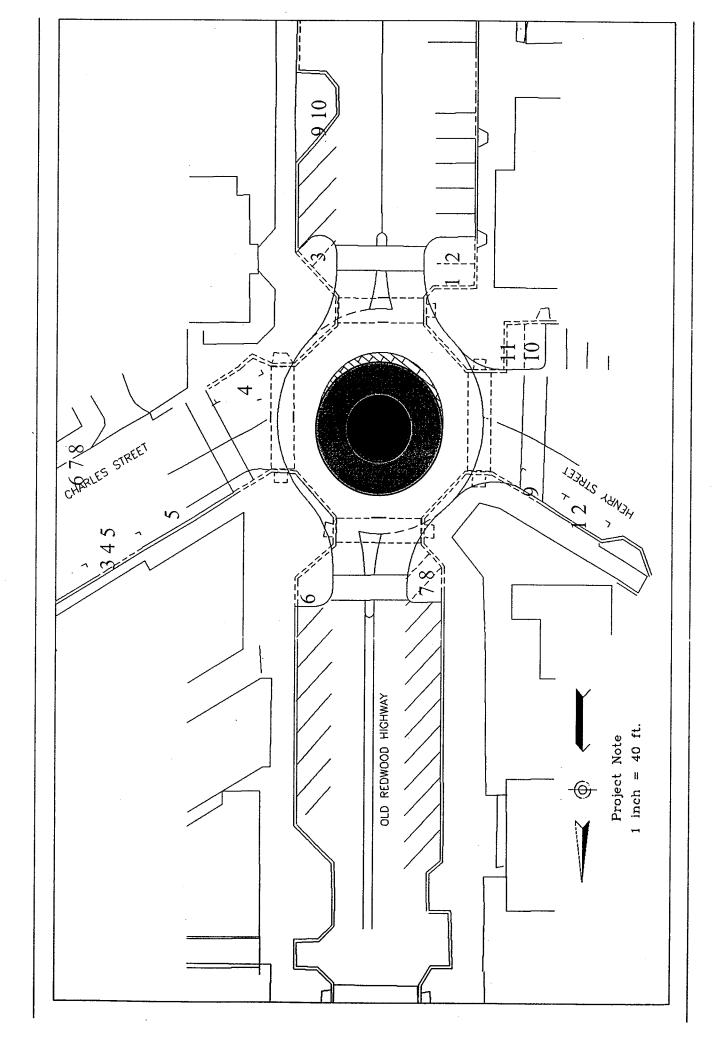
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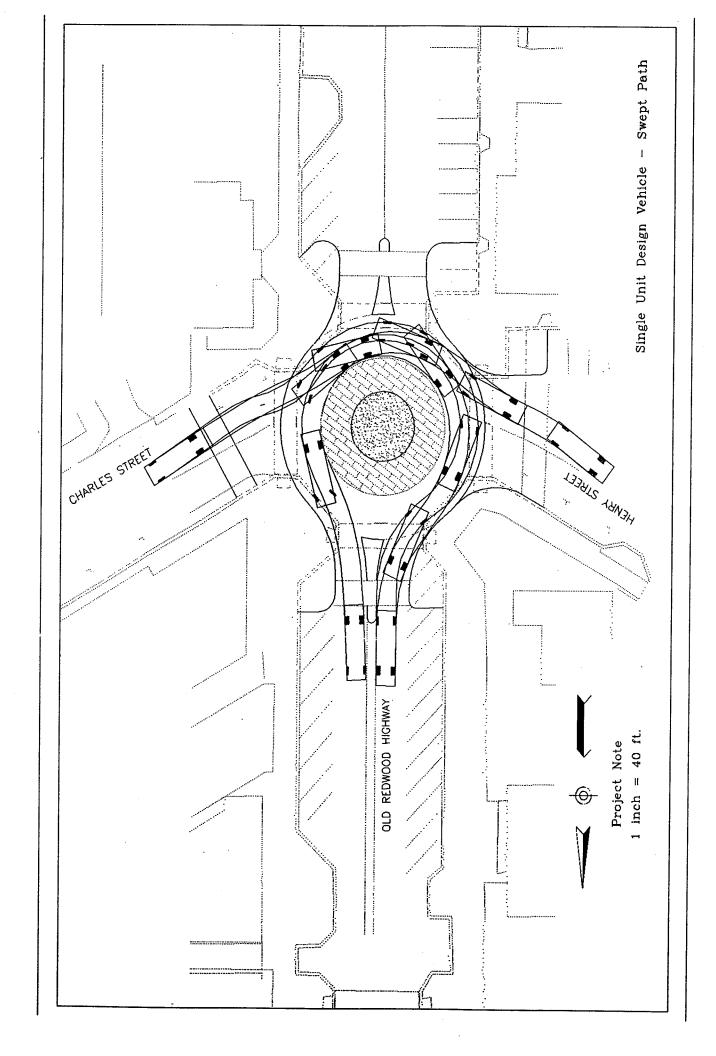
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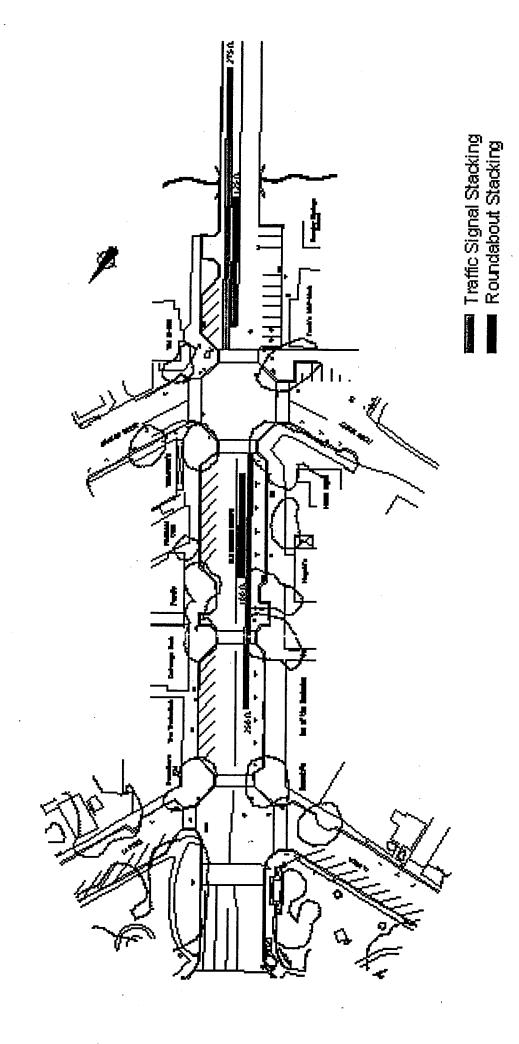
Summary of Intersection Level of Service With Traffic Control Options

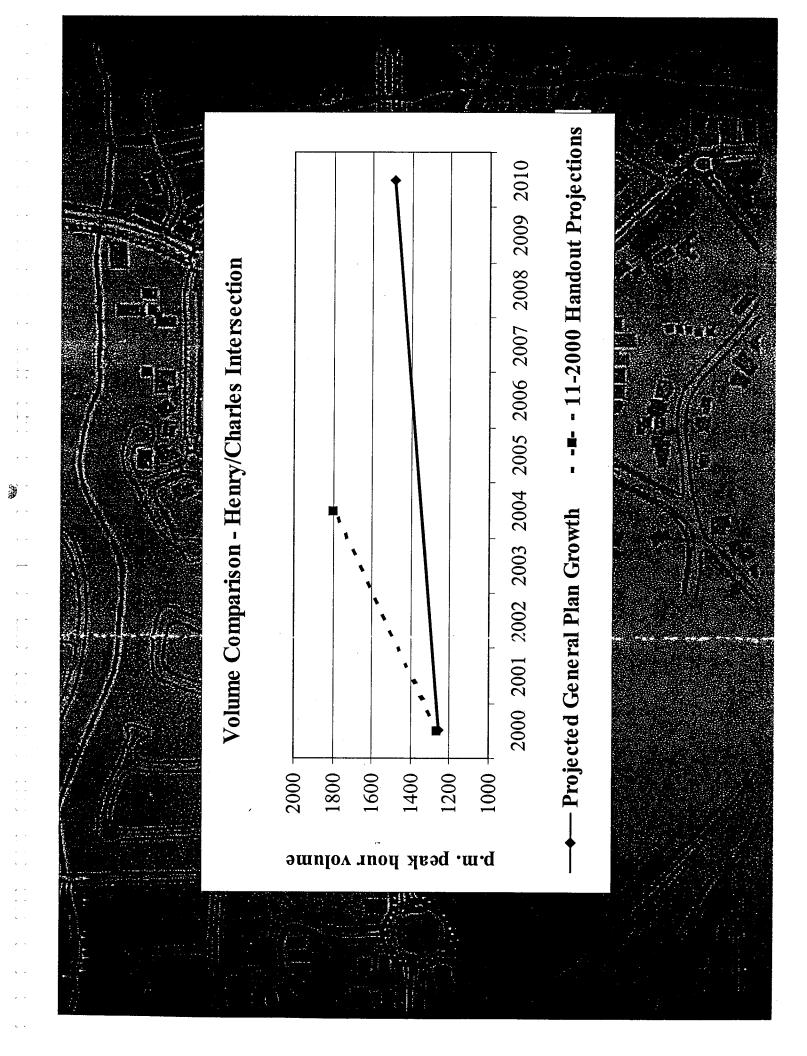
Intersection	Exi	sting (Onditi	suo	Existing Conditions Future*	re*
Approach	A.M.	Peak	P.M.	Peak	A.M. Peak P.M. Peak P.M. Peak	Peak
	Delay	TOS	Delay	TOS	Delay LOS Delay LOS Delay LOS	TOS
Old Redwood Highway/Henry StCharles St.						
Existing 4-way Stop	7.7	В	22.6 D	D	75.0	ഥ
Roundabout	9.0	V	0.7	A	1.3	A
Traffic Signal	0.1	¥	5.6	В	11.3	В

Old Redwood Highway/Cotati Downtown Intersection Design Option Comparison

Improvement Areas	Existing 4-way stop	Traffic Signal	Roundabout
Delay/LOS	LOS D-F	LOSB	LOSA
Parking Maneuvers	Least gaps	Most gaps	More gaps
Queuing on ORH	excessive	11 vehicles/275 feet	5 vehicles/125 feet
Vehicular Safety	No change	No significant change	Best
Pedestrian/Bike Safety	No change	No significant change	Better
Air Quality	Worst	Better	Best
Travel Speed	No change	Increase	Slower
Corridor Travel Time	No change	Better	Decrease
Aesthetics	66666	ننننذ	55555

Stacking Distance Comparison - Future PM Peak Hour





Downtown Vision Plan - Walkable Cotati Phase 1 Council Questions from 8/30/00 Council Study Session with Responses.

1. Are there similar downtown locations to Cotati with roundabouts?

Use of roundabouts in the United States is only recently growing in popularity and is being applied in a variety of situations including downtown areas. There are no local examples of downtown roundabouts. The Casa Grande/Ely Roundabout in Petaluma is the only arterial roundabout in Sonoma County. There are examples of roundabout in pedestrian, commercial area shown on the attached photos including Bradenton Beach, Florida; Fort Pierce, Florida; Annapolis, Maryland; a European example, Avon, Colorado; and Gettysburg, Pennsylvania.

2. What are the impacts of roundabouts on the City bike plan and bicycle safety?

A modern roundabout is considered safer for bicyclists compared to signalized intersections. Studies of early roundabout designs in western France revealed that certain aspects of roundabouts such as dedicated bicycle lanes in the circular roadway area had negative impacts to bicycle safety. An essential element of designing is to maintain vehicle speed in a roundabout between 10 and 15 miles per hour. At this design speeds the bicyclist and the motorists both travel through the roundabout at the same relative speed giving the bicyclist equal consideration and safety for the bicyclist is improved. The results of these studies have been included into modern roundabout design criteria and would be incorporated into the designs proposed. There are, as well, a number of bicyclist which feel uncomfortable within the roundabout, therefore provisions are included which provide access opportunities for bicyclist to leave the roadway and use the perimeter sidewalk areas.

It should be noted that is generally not appropriate to stripe bikelanes in the downtown area that has diagonal parking. This section of Old Redwood Highway is intended to be a destination point, not a through traffic and bike route. Therefore, the roundabout as proposed will not adversely influence bicyclist behavior and discourage bicyclist from accessing the corridor.

3. What are the impacts to vehicular speed through downtown with and without roundabouts?

With existing stop sign controlled intersection at Old Redwood Highway/Henry-Charles:

Vehicular traffic is currently metered at the stop sign controlled intersection Henry-Charles streets. Vehicles departing and entering this intersection on Old Redwood Highway are required to stop and speeds are controlled near the intersection. Vehicle speeds from 200 feet or further from controlled intersections are not expected to be impacted.

With roundabout at Old Redwood Highway/Henry Charles:

Vehicular speeds leaving the intersection will be expected to be approximately the same as with a four-way stop. Mid-block speed of vehicles are not anticipated to be affected as results of the installation of one or more roundabouts, unless a roundabout is included at Old Redwood Highway/La Plaza South. Under this condition, speeds approaching the intersection from both directions should decrease. Travel time through the corridors will decrease as vehicular delayed at the existing stop sign controlled intersection are reduced.

With signalization of Old Redwood Highway/Henry-Charles.

Vehicles speeds may increase at or near the intersection of Henry-Charles with the installation of a traffic signal. Unrestricted north and south traffic movements would not be encouraged to the reduce speed during

the green intervals for Old Redwood Highway. It is anticipated north/south movements on Old Redwood Highway will receive the majority of signal green time. Some increase in speed at the intersection of Henry-Charles can be expected for vehicles entering the intersection during the yellow clearance interval.

4. How many parking spaces will be lost and can they be replaced?

The proposed roundabout will result in a maximum loss of 11 parking spaces at the intersection of Old Redwood Highway/Henry-Charles Streets. The potential exists to reduce the number of lost parking spaces during the detail design phase. Recently the City of Cotati successfully gained 11 parking spaces as a result of early implementation of diagonal parking as part of the Walkable Cotati Phase 1 plan. There are additional opportunities for increasing parking in the area by approximately 6 to 12 spaces by including diagonal parking on side streets such as La Plaza South and Henry-Charles Streets. The number of parking spaces can also be increased with street frontage improvements along Henry and Charles Streets and would include curb, gutter and sidewalks.

5. What are of the impacts to parking maneuvers on Old Redwood Highway?

For the easterly side of Old Redwood Highway, parking maneuvers are not expected to be significantly impacted beneficially or adversely as a result of the installation of a roundabout. The existing stop sign controlled intersection at Henry-Charles currently meters traffic flow in steady and regular intervals during peak periods. The roundabout would regulate traffic flows on Old Redwood Highway in the northerly direction in a similar way. However, the roundabout would have the ability to maintain some semblance of any platooning of vehicles arriving into the intersection. Platooning would provide more gaps for parking maneuvers.

Installation of a roundabout at Henry-Charles can be perceived as having a beneficial impact to parking maneuvers on the westerly side of Old Redwood Highway as vehicle backups at existing stop sign control the intersection are reduced making parking maneuvers difficult. Parking maneuvers into and out of diagonal spaces in the southbound direction on Old Redwood Highway will encounter easier accessibility as vehicle backups at the intersection are reduced.

6. What are the impacts to local adjacent streets?

There are no measurable beneficial or adverse impacts to Henry Street or Charles Street with the installation of the roundabout at Old Redwood Highway/Henry-Charles. The existing four-ways stop at Old Redwood Highway/Henry-Charles facilitates through movement across the busier Old Redwood Highway and the installation of a roundabout would therefore not alter the local travel patterns on Henry-Charles.

A roundabout at Old Redwood Highway/ La Plaza South has the potential to increase traffic volumes on La Plaza South with the installation of a roundabout at Old Redwood Highway. Motorists traveling easterly on La Plaza may find this route an attractive alternative to the signalized intersection of West Sierra-East Cotati Avenue. As a result of being able to cross Old Redwood Highway easily at the roundabout volumes are expected to increase.

7. What are the impacts to pedestrian crossing the street.

Studies conducted by the Federal Highway Administration confirm earlier studies in Australia that roundabouts are safer for pedestrians than other types of traffic control. Pedestrian crossings at the roundabout controlled intersection will be safer as pedestrians will cross a shorter distance and will have a median refuge island. Pedestrians will encounter fewer conflicting vehicular movements with which to confront. The use of splitter

islands at the roundabout provides a refuge area for pedestrians allowing the pedestrian to cross the street one direction at a time and from a relatively safe vantage point.

However, blind pedestrians have encountered some difficulty with using roundabouts as the audible queues they rely upon have changed. The use of In-pavement Pedestrian warning devices such as are used in Petaluma could be employed to assist all pedestrian crossings at the roundabout and at the existing mid-block pedestrian crossing.

Textured Pavements - Attractive, though may not actually slow traffit Chicanes - Effective, though require substantial loss of on-street par · Cobbled Roadways - Loud, potentially hazardous to pedestrians and Speed Humps = Effective, though may be inappropriate in downtow · Raised Intersection - Expensive, relatively low-impact on wehicle sp Potential Traffic Calming Devices in Downtown Cor

Roundabouts *require* lower vehicle speeds, reduce pedestrian cro distances, facilitate parking circulation, and lead to reduced pol Curb Extensions reduce pedestrian crossing distances

Narrowed vehicle lanes reduce speeds and may increase driver a

Downtown Vision Plan - Walkable Cotati Phase 1 December 13, 2000 Response to Comments from 12/6/00 Workshop

Why are pedestrians safer in roundabouts?

Studies of roundabouts by the Federal Highway Administration (FHWA) and the Insurance Institute for Highway Safety have confirmed that roundabouts are the safest form of traffic control for pedestrians. Roundabouts feature slower moving traffic which gives drivers more opportunity to recognize the presence of pedestrians. Due to the set-back location of the crosswalk, pedestrians frequently cross behind a vehicles which is waiting to enter the roundabout. The splitter islands on each approach provide refuge for pedestrians so that only one direction of traffic has to be crossed at a time. The position of the crosswalks creates a situation where vehicles are approaching pedestrians perpendicularly giving drivers the best view of the pedestrian. Compare this with traffic signals where right turning vehicles on red approach pedestrians at an acute angle. This movement at traffic signals is generally the cause of the most pedestrian accidents at signal controlled intersections.

The roundabout option can be supplemented with in-pavement crosswalk warning lights, similar to those in Petaluma. These lights have been used for the first time at a roundabout in Colorado.

How do bicyclists negotiate the roundabout?

The FHWA recommended approach is to provide the bicyclist with two options. Since the bicyclist is traveling at the same speeds as the vehicular traffic in approaching the roundabout, the cyclist can "claim the lane" and become a vehicle in negotiating the roundabout. As an alternative, exit ramps should be provided so that the cyclist can exit the street and become a pedestrian in crossing.

Will the roundabout cause a backup of cars from the traffic signal at East Cotati Avenue?

Based on the capacity analysis of the intersection of Old Redwood Highway/East Cotati Avenue, assuming future traffic volumes, we believe that queuing in the northbound direction will not extend significantly past the crosswalk just south of La Plaza south. The roundabout will feed traffic northbound toward the traffic signal so that the pace of traffic will be similar at the northbound approach at East Cotati Avenue will be similar to existing conditions. A traffic signal at Henry Street-Charles Street will result in more surges of traffic at the northbound approach of the East Cotati Avenue with queues that are approximately 125 feet longer than queues with the roundabout, extending to the vicinity of Exchange Bank. In summary, the roundabout should have no significant negative affect on the traffic signal at East Cotati Avenue.

How do these plans interface with the entire vision plan?

Both plan options have been designed so that they can stand alone regardless of what happens in the corridor. Although they both solidify that Old Redwood Highway will remain a two-lane facility, south of East Cotati Avenue. The roundabout option is consistent with the Walkable Cotati plan,

Project Cost Estimate - Alternate 1- Signalized Intersection

Project Name: Walkable Cotati Phase 1 Project Owner: City of Cotati Project Location: Cotati, CA	Project No.: Estimated by:	Fishe	er/Wise
110jour 200ation, Octati, OA	Checked by:		
	Date:	Jan. 8	3, 2001
Summary			
Mobilization		\$	50,000
Tree and root pruning & structural soil		\$	110,875
North Entry Traffic Calming		\$	208,915
Northeast Streetscape		\$	257,124
Northwest Streetscape		\$	260,363
Charles/Henry Streets		\$	156,428
Signalized Intersection		\$	456,761
Southeast Streetscape		\$	36,486
Southwest Streetscape		\$	85,624
Bridge Area		\$	54,836
AC Overlay		\$	79,643
Subtotal		\$	1,757,053
Contingencies (25%)		\$	439,263
Public involvement, studies, engineering (15%)		\$	263,558
Construction-related support services (12%)		\$	210,846
Total		\$	2,670,721
Raca Project Summan.			
Base Project Summary			
Note: items include contingencies Mobilization			
Signalized intersection improvements		\$	25,000
Tree planting (existing trees only)		\$.	76,802
Repair additional uprooted sidewalk		\$	138,594
AC Overlay		\$	37,500
North Entry traffic calming		\$	65,768
Bridge Modifications		\$	125,256
Drugo modifications		\$	62,220
Total (excluding studies/engineering)		\$	531,139

item	Quantity	Units	Fngine	rina	Estimate
			Unit Cost	7	Total
TREE AND ROOT PRUNING & SOIL PREP. (For 14 sycamores and 1 redwood	i)	 		╁	Total
3' depth excavation of area to receive structural soil incl. offhaul	350	су	\$ 25.00	\$	8,750
Pneumatic excavation of root zone of existing trees	15	ea	\$ 1,000.00		15,000
Root pruning	15	ea	\$ 150.00		2,250
Crown reduction	15	ea	\$ 500.00		7,500
Structural soil at \$35/CY plus placement	350	cy	\$ 45.00		15,750
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	400	If	\$ 35.00		14,000
Patch/add existing 4" concrete sidewalk w/ lamp black and hand seeded aggregate	2,550	sf	\$ 8.00		20,400
Twinkle lights in trees	15	ea	\$ 800.00		12,000
3" gravel mulch under tree grates only	375	sf	\$ 0.60	_	225
Metal tree grates 5' square, painted custom color	15	ea	\$ 1,000.00		
		ea	Subtotal	12	15,000 110,875.00
			Odbiolai	╄╼	110,075.00
NORTH ENTRY TRAFFIC CALMING				╂─	
Pedestrian barriers and control	1	allow	\$ 1,500.00	\$	4 500
		anow	Ψ 1,500.00	13	1,500
Demolition				╁	
Adjust (E) Utility Rim to grade	3	ea	\$ 1,000.00	\$	2.000
Demo (E) Curb & Gutter	341	If	\$ 1,000.00	\$	3,000 341
Demo (E) Concrete Paving	350	sf	\$ 3.00		1,050
Demo (E) Concrete sidewalk	4,248	sf	\$ 1.00	\$	4,248
Sycamore removal (Includes stump removal typ.)	4	ea	\$ 1,500.00	\$	6,000
	-		Subtotal	\$	14,639
Lighting Costs			Oubtotal	-	14,039
14' height acom pole lights (plain)	18	ea	\$ 2,500.00	\$	45,000
Sentinel light in median	1	ea	\$ 7,500.00	\$	7,500
		- ca	Subtotal	\$	52,500
Landscaping costs			Subtotal	13	52,500
Fine grading	1,279	sf	\$ 1.00	\$	4 070
12" depth topsoil import and spreading for groundcover & shrubs	47	cy	\$ 100.00	\$	1,279
Planter mix and installation in pots	8	cy	\$ 100.00		4,700
3" gravel mulch under tree grates only	50	sf	\$ 0.60	\$	800
3" depth bark mulch, including installation	1,179	sf		\$	30
Weed control fabric, installed (Includes underneath tree grates)		sf		\$	707
24" box trees (includes staking)	1,179		\$ 0.50	\$	590
New lawn in plaza	6	ea	\$ 350.00	\$	2,100
1 gallon groundcover	115	sf	\$ 1.00	\$	115
Annuals 4" pot	294	ea	\$ 9.00	\$	2,646
74 mais + pot	637	plant	\$ 3.00	\$	1,911
Concrete work			Subtotal	\$	14,878
Curb & Gutter					
	650	<u>If</u>	\$ 18.00	\$	11,700
Curb & Gutter (Center Island)	144	lf	\$ 15.00	\$	2,160
2" Ac Overlay	12,812		\$ 1.00		12,812
14" tall seat walls with tile inserts	34	lf	\$ 125.00	\$	4,250
2' tall concrete pilasters with tile inserts and cast stone caps (Roundabout NIC)	4	ea	\$ 1,500.00	\$	6,000
New peach/pink colored sidewalks with blue-green tile inlays	3,110	sf	\$ 8.00	\$	24,880
New 4" concrete sidewalk w/ lamp black and hand seeded aggregate	2,031	sf	\$ 8.00	\$	16,248
Special paving to encourage window shopping	114	sf	\$ 20.00	\$	2,280
Excluding AC overlay			Subtotal	\$	67,518

Irrigation Costs				
Drip irrigation system for trees, (IPS hose in sleeve between tree wells), spra	v irrigation	 		
system for shrubs/groundcovers/pots water meters.	1	allow	\$ 5,000.00	\$ E 000
		allow	Subtotal	 5,000
Site Furnishings			Subtotal	\$ 5,000
Wood benches	1	ea	\$ 2,000,00	
Artistic bike racks	3	ea	7	\$ 2,000
Clay pot (includes drainlines)	8	ea		\$ 2,400
Cast stone trash receptacles	- 2			\$ 6,400
Cast stone recycle bins	2	ea	\$ 1,000.00	\$ 2,000
Cast stone ash urns	2	ea	\$ 2,000.00	\$ 4,000
Metal tree grates 5' square, painted custom color	3	ea	\$ 1,000.00	\$ 2,000
g and a equal of painted educati, color		ea	\$ 1,000.00	\$ 3,000
Tree planting preparation costs			Subtotal	\$ 21,800
3' depth excavation of area to receive structural soil incl. offhaul	220			
Structural soil at \$35/CY plus placement	339	су	\$ 25.00	\$ 8,475
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	339	cy	\$ 45.00	\$ 15,255
trending the complete to storm drain	210	lf	\$ 35.00	\$ 7,350
Landscape and sidewalk maintenance-6 months			Subtotal	\$ 31,080
Sidewalk and crosswalk steam cleaning every 6 months			-	
Landscaping	5,141	sf	\$ 0	\$ 1,285
Annual color	1,504	sf	\$ 0	\$ 180
A fillual Color	325	sf	\$ 3	\$ 975
TOTAL FOR MORTH ENTRY TRAFFIC CALLS			Subtotal	\$ 2,441
TOTAL FOR NORTH ENTRY TRAFFIC CALMING AREA				\$ 208,915

NORTHEAST STREETSCAPE AREA Pedestrian barriers and control		1			
out out the same control	1	allow	/ \$ 1,000.00	\$	1,0
Demolition		 	 	-	·
Demo (E) Curb & Gutter	291	If	\$ 1.00	. -	
Demo (E) Concrete sidewalk	4,520	4	\$ 1.00		
Pear tree removal	1 1		\$ 400.00		4,5
Pear "boxes" to be removed NIC	1		400.00	\$	
Groundcover/shrub removal	240		\$ 0.30		
rrigation system demolition (Remove valves and cap ex. lines only)	1				
			Subtotal	\$	5,7
lighting Costs		$\overline{}$		╅	
4' height acom pole lights (plain)	9	ea	\$ 2,500.00	\$	22,5
winkle lights in trees	7	ea	\$ 800.00		5,6
			Subtotal	s	28,1
andscaping costs		1		† <u>*</u>	
ine grading	252	sf	\$ 1.00	\$	2
2" depth topsoil import and spreading for groundcover & shrubs	9	су	\$ 100.00		
Planter mix and installation in pots	7	cy	\$ 100.00		
gravel mulch under tree grates only	25	sf	\$ 0.60		
" depth bark mulch, including installation	252	sf	\$ 0.60		
Veed control fabric, installed (Includes underneath tree grates)	277	sf	\$ 0.50		1
4" box trees (includes staking)	7	ea	\$ 350.00		1
gallon groundcover	50	ea			2,4
nnuals 4" pot	52			<u> </u>	
	52	plants		\$	1
oncrete work	 	·	Subtotal	\$	5,2
* AC Overlay	6,275		6 400	 _	
urb & Gutter		sf	\$ 1.00	<u> </u>	6,2
4" tall seat walls with tile inserts	406	lf If	\$ 18.00		7,3
tall concrete pilasters with tile inserts and cast stone caps (Roundabout NIC)		lf .	\$ 125.00	\$	2,7
mall street fountain, 6' diameter, 16' tall w/ cast stone cap & tile inserts	3	ea	\$ 1,500.00		4,5
ew peach/pink colored sidewalks with blue-green tile inlays	1 2 2 2 2 2	ea	\$ 20,000.00		20,0
ew vehicular 6" concrete sidewalk w/color and tile inlays	6,330	sf	\$ 8.00		50,6
pecial sidewalk for window shopping	100	sf	\$ 12.00	\$	1,2
Auding AC overlay	390	sf	\$ 8.00	\$	3,1
Adding 70 Overlay			Subtotal	\$	75,9
rigation Costs					
rip irrigation system for trees, (IPS hose in sleeve between tree wells), system for shrubs/groundcovers/pots, water meters.					
system for shirdbs/groundcovers/pols, water meters.	1	allow	\$ 10,000.00	\$	10,0
ite Furnishings			Subtotal	\$	10,0
tistic bike racks					
	1	ea	\$ 800.00	\$	8
etal pedestrian passageway enhancements-large, aluminum	2	ea	\$ 7,000.00	\$	14,0
etal pedestrian passageway enhancement-Ismall, aluminum	1	ea	\$ 3,500.00	\$	3,5
ay pot (includes drainlines)	13	ea	\$ 800.00		10,4
ast stone trash receptacles	1	ea	\$ 1,000.00	\$	1,00
tall ornamental steel fence	152	lf .	\$ 80.00		12,10
ast stone recycle bins	1	ea	\$ 2,000.00	\$	2,00
ast stone ash urns	1	ea	\$ 1,000.00	\$	1,00
etal tree grates 5' square, painted custom color	1	ea	\$ 1,000.00	\$	1,00
ack metal café table and chair set	63	ea	\$ 800.00	\$	50,40
nbrellas for café seating sets	23	ea	\$ 200.00	\$	
stom walls incorporating news stands	1	ea	\$ 2,000.00	\$	4,60
			Subtotal		2,00
ee planting preparation costs (For new trees)			Cubiolai	\$	102,86
depth excavation of area to receive structural soil incl. offhaul	264	-CV	\$ 25.00	•	
uctural soil at \$35/CY plus placement	264			\$	6,60
stall 4" french drain(STR 35 pipe) for trench, connect to storm drain	220			<u> </u>	11,88
, , , , , , , , , , , , , , , , , , ,	220		\$ 35.00	\$	7,70
ndscape and sidewalk maintenance-6 months			Subtotal	\$	26,18
dewalk and crosswalk steam cleaning every 6 months	6 000				
ee maintenance	6,820			\$	1,70
ndscaping	7			\$	16
nual color	200		\$ 0		2
	52			\$	15
TAL FOR NORTHEAST STREETSCAPE AREA			Subtotal	\$	2,05
					257,123.

NORTHWEST STREETSCAPE AREA			1	1	
Pedestrian barriers and control	1	allow	\$ 1,000.00	\$	1,000
D				Ľ	.,
Demolition					
Demo (E) Curb & Gutter Demo (E) Concrete sidewalk	272		\$ 1.00		272
Groundcover/shrub removal	5,260	sf	\$ 1.00		5,260
Irrigation system demolition (Remove valves and cap ex. lines only)	50	sf	\$ 0.30		15
Comment (tollioto talites and cap ex. lines only)	1 1	allow	\$ 500.00 Subtotal	\$ \$	500
Lighting Costs	+	 	Subtotal	+3	515
14' height acorn pole lights (plain)	9	ea	\$ 2,500.00	\$	22,500
	1	T -	Subtotal	\$	22,500
Landscaping costs			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	+-	
Fine grading	263	sf	\$ 1.00	\$	263
12" depth topsoil import and spreading for groundcover & shrubs	263	су	\$ 100.00		26,300
Planter mix and installation in pots	7	су	\$ 100.00	_	700
3" depth bark mulch, including installation	263	sf	\$ 0.60	\$	158
Weed control fabric, installed (Includes underneath tree grates) 24" box trees (includes staking)	263	sf	\$ 0.50	\$	132
1 gallon groundcover	7	ea	\$ 350.00	\$	2,450
Annuals 4" pot	66	ea	\$ 9.00	\$	594
	56	plant	\$ 3.00 Subtotal	\$	168
Concrete work			Subtotal	\$	30,764
2" AC Overlay	6,051	sf	\$ 2.65	\$	16.025
Curb & Gutter	409	lf	\$ 18.00	\$	16,035 7,362
Passageway enhancement:4' tall concrete pilasters w/ tile inlay& tubular steel	1	ea	\$ 30,000.00	\$	30,000
New peach/pink colored sidewalks with blue-green tile inlays	7,448	sf	\$ 8.00	\$	59,584
New vehicular 6" concrete sidewalk w/color and tile inlays	100	sf	\$ 12.00	\$	1,200
Excluding AC overlay			Subtotal	\$	74,749
Irrigation Costs	<u> </u>				
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),					
system for shrubs/groundcovers/pots, water meters.	1	allow	\$ 10,000.00	\$	10,000
Site Furnishings			Subtotal	\$	10,000
Wood benches	3		\$ 2,000,00	-	0.000
Artistic bike racks	2	ea ea	\$ 2,000.00 \$ 800.00	\$	6,000 1,600
3' tall ornamental steel fence	128	lf	\$ 80.00	\$	10,240
Clay pot (includes drainlines)	14	ea	\$ 800.00	\$	11,200
Cast stone trash receptacles	1	ea	\$ 1,000.00	\$	1,000
Cast stone recycle bins	1	ea	\$ 2,000.00	\$	2,000
Black metal café table and chair cat	19	ea	\$ 800.00	· ·	14,400
Mailboxes, FedEx boxes, etc	4	ea	NIC		
Umbrellas for café seating sets	18	ea	\$ 200.00	\$	3,600
Flower kiosk	1	ea	\$ 30,000.00	_	30,000
Custom walls incorporating news stands	8	ea	\$ 2,000.00	\$	16,000
Tree planting preparation costs (For new trees)	ļ		Subtotal	\$	96,040
3' depth excavation of area to receive structural soil incl. offhaul			<u> </u>		
Structural soil at \$35/CY plus placement	217	cy	\$ 25.00	\$	5,425
Install 4* french drain(STR 35 pipe) for trench, connect to storm drain	217	cy If	\$ 45.00 \$ 35.00	\$	9,765
The property of the control of the c	210	"	\$ 35.00 Subtotal	\$ \$	7,350
Landscape and sidewalk maintenance-6 months	++		Captotal	Ψ	22,540
Sidewalk and crosswalk steam cleaning every 6 months	7,548	sf	\$ 0	\$	1,887
Tree maintenance	7	ea		* -	168
Landscaping	263	sf		\$	32
Annual color	56	sf		\$	168
TOTAL FOR MARIE .			Subtotal	\$	2,255
TOTAL FOR NORTHWEST STREETSCAPE AREA					\$260,362.71
CHADI EC CYDETT ADEA	·				
CHARLES STREET AREA	$oxed{\Box}$				
Podoctrian hawlers and control	1				
Pedestrian barriers and control	1 1	allow	\$ 1,000.00	\$	1,000
	[
Inhting Costs					
Lighting Costs					
14' height acom pole lights (plain)	5	ea	\$ 2,500.00		12,500
			\$ 800.00	\$ \$	12,500 3,200 15,700

Landscaping costs				т—	
Fine grading	122	of .	\$ 100	 _	400
12" depth topsoil import and spreading for groundcover & shrubs	132		\$ 1.00 \$ 100.00		132 500
3" gravel mulch under tree grates only	25	sf	\$ 0.60		15
3" depth bark mulch, including installation	132	sf	\$ 0.60		79
Weed control fabric, installed (Includes underneath tree grates)	182	sf	\$ 0.50		91
24" box trees (includes staking)	4	ea	\$ 350.00		1,400
1 gallon groundcover	33	ea	\$ 9.00	\$	297
		"	Subtotal	\$	2,514
Concrete work		1		 	2,017
2" AC Overlay	1,800	sf	\$ 2.00	\$	3,600
Curb & Gutter	228	If	\$ 18.00		4,104
New vehicular 6" concrete sidewalk w/color and tile inlays	120	sf	\$ 12.00		1,440
New 4" concrete sidewalk w/ lamp black and hand seeded aggregate	1,485	sf	\$ 8.00	-	11,880
			Subtotal	\$	21,024
Demolition					· · · · · · · · · · · · · · · · · · ·
Demo (E) Curb & Gutter	96	lf	\$ 1.00	\$	96
Demo (E) Concrete sidewalk	512	sf	\$ 1.00	\$	512
			Subtotal	\$	608
Irrigation Costs					
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),					
system for shrubs/groundcovers/pots, water meters.	1	allow	\$ 5,000.00	\$	5,000
			Subtotal	\$	5,000
Site Furnishings					
Metal tree grates 5' square, painted custom color	1	ea	\$ 1,000.00	\$	1,000
			Subtotal	\$	1,000
Tree planting preparation costs					
3' depth excavation of area to receive structural soil incl. offhaul	178	су	\$ 25.00	\$	4,450
Structural soil at \$35/CY plus placement	178	су	\$ 45.00	\$	8,010
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	220	lf .	\$ 35.00	\$	7,700
		ļ	Subtotal	\$	20,160
Landscape and sidewalk maintenance-6 months					
Sidewalk and crosswalk steam cleaning every 6 months	1,485	sf	\$ 0	\$	371
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance	4	ea	\$ 24	\$	96
Sidewalk and crosswalk steam cleaning every 6 months	-		\$ 24 \$ 0	\$ \$	96 16
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping	4	ea	\$ 24	\$	96 16 483
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance	4	ea	\$ 24 \$ 0	\$ \$	96 16 483
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA	4	ea	\$ 24 \$ 0	\$ \$	96 16 483
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA	132	ea sf	\$ 24 \$ 0 Subtotal	\$ \$ \$	96 16 483 \$67,393.29
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA	4	ea	\$ 24 \$ 0	\$ \$	96 16 483
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control	132	ea sf	\$ 24 \$ 0 Subtotal	\$ \$ \$	96 16 483 \$67,393.29
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition	1	ea sf	\$ 24 \$ 0 Subtotal \$ 1,000.00	\$ \$ \$	96 16 483 \$67,393.29
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter	1 575	ea sf allow	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00	\$ \$ \$	96 16 483 \$67,393.29 1,000
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk	1 575 7,870	ea sf allow	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 1.00	\$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter	1 575	ea sf allow	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 1.00 \$ 500.00	\$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk	1 575 7,870	ea sf allow	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 1.00	\$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demo(E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs	1 1 575 7,870	ea sf allow	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 Subtotal	\$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees	4 132 1 1 575 7,870 1	ea sf allow	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 Subtotal \$ 2,500.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees	1 575 7,870 1 19 5	ea sf allow lf sf allow ea ea ea	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain)	4 132 1 1 575 7,870 1	ea sf allow	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 15,000.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees	1 575 7,870 1 19 5	ea sf allow lf sf allow ea ea ea	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acorn pole lights (plain) Twinkle lights in trees Conduits for future signal & street lights Landscaping costs Fine grading	1 575 7,870 1 19 5 1	ea sf allow lf sf allow ea ea ea	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 15,000.00 Subtotal	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000 66,500
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acorn pole lights (plain) Twinkle lights in trees Conduits for future signal & street lights Landscaping costs Fine grading 12" depth topsoil import and spreading for groundcover & shrubs	1 575 7,870 1 19 5	ea sf allow If sf allow ea ea ls	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 15,000.00 Subtotal	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees Conduits for future signal & street lights Landscaping costs Fine grading 12" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots	1 575 7,870 1 19 5 1 3,200	ea sf allow ea ea is sf cy	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 15,000.00 Subtotal \$ 1.00 \$ 1.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000 66,500 3,200 11,800
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees Conduits for future signal & street lights Landscaping costs Fine grading 12" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots 3" gravel mulch under tree grates only	1 575 7,870 1 19 5 1 3,200	ea sf allow ea ea is	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 15,000.00 Subtotal \$ 1.00 \$ 1.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000 66,500 3,200
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acorn pole lights (plain) Twinkle lights in trees Conduits for future signal & street lights Landscaping costs Fine grading 12" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots 3" gravel mulch under tree grates only 3" depth bark mulch, including installation	1 575 7,870 1 19 5 1 3,200 118	ea sf allow If sf allow ea ea ls sf cy cy	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 15,000.00 Subtotal \$ 1.00 \$ 100.00 \$ 100.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000 66,500 3,200 11,800 900
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees Conduits for future signal & street lights Landscaping costs Fine grading 12" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots 3" gravel mulch under tree grates only 3" depth bark mulch, including installation Weed control fabric, installed (Includes underneath tree grates)	1 575 7,870 1 19 5 1 3,200 118 9	ea sf allow If sf allow ea ea Is sf cy cy sf	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 \$ 500.00 \$ 2,500.00 \$ 15,000.00 \$ 15,000.00 \$ 100.00 \$ 100.00 \$ 0.60	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000 66,500 3,200 11,800 900 60
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees Conduits for future signal & street lights Landscaping costs Fine grading 12" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots 3" gravel mulch under tree grates only 3" depth bark mulch, including installation Weed control fabric, installed (Includes underneath tree grates) 24" box trees (includes staking)	1132 575 7,870 1 19 55 1 1 3,200 118 9 100 3,300	ea sf allow If sf allow ea ea Is sf cy cy sf sf	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 \$ 500.00 \$ 2,500.00 \$ 15,000.00 \$ 15,000.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 0.60	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000 66,500 11,800 900 60 1,980
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acorn pole lights (plain) Twinkle lights in trees Conduits for future signal & street lights Landscaping costs Fine grading 12" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots 3" gravel mulch under tree grates only 3" depth bark mulch, including installation Weed control fabric, installed (Includes underneath tree grates) 24" box trees (includes staking) 1 gallon groundcover	118 9 100 3,300 3,721	ea sf sf allow ea ea ls sf cy cy sf sf sf	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 15,000.00 \$ 15,000.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 0.60 \$ 0.60 \$ 0.50	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000 66,500 3,200 11,800 900 60 1,980 1,861
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acorn pole lights (plain) Twinkle lights in trees Conduits for future signal & street lights Landscaping costs Fine grading 12" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots 3" gravel mulch under tree grates only 3" depth bark mulch, including installation Weed control fabric, installed (Includes underneath tree grates) 24" box trees (includes staking) 1 gallon groundcover	118 9 100 3,300 3,721 5	ea sf sf allow ea ea ls sf cy cy sf sf ea	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 100.00 \$ 2,500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 15,000.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 0.60 \$ 0.60 \$ 0.50 \$ 350.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000 66,500 3,200 11,800 900 60 1,980 1,861 1,750
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees Conduits for future signal & street lights Landscaping costs Fine grading 12" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots 3" gravel mulch under tree grates only 3" depth bark mulch, including installation Weed control fabric, installed (Includes underneath tree grates) 24" box trees (includes staking) 1 gallon groundcover Annuals 4" pot	3,200 118 9 100 3,300 3,721 5 800	ea sf sf allow If sf allow ea ea ls sf cy cy sf sf sf ea ea ea	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 15,000.00 \$ 15,000.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 0.60 \$ 0.50 \$ 350.00 \$ 9.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000 66,500 11,800 900 60 1,980 1,861 1,750 7,200
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees Conduits for future signal & street lights Landscaping costs Fine grading 12" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots 3" gravel mulch under tree grates only 3" depth bark mulch, including installation Weed control fabric, installed (Includes underneath tree grates) 24" box trees (includes staking) 1 gallon groundcover Annuals 4" pot	3,200 118 9 100 3,300 3,721 5 800 72	ea sf sf allow If sf allow ea ea ls sf cy cy sf sf sf ea ea ea	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 100.00 \$ 2,500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 15,000.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 0.60 \$ 0.60 \$ 0.50 \$ 350.00 \$ 9.00 \$ 3.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000 66,500 11,800 900 60 1,980 1,861 1,750 7,200 216
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acorn pole lights (plain) Twinkle lights in trees Conduits for future signal & street lights Landscaping costs Fine grading 12" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots 3" gravel mulch under tree grates only 3" depth bark mulch, including installation Weed control fabric, installed (Includes underneath tree grates) 24" box trees (includes staking) 1 gallon groundcover Annuals 4" pot Concrete work 2" AC Overlay	3,200 118 9 100 3,300 3,721 5 800 72	ea sf allow If sf allow ea ea ls sf cy cy sf sf ea ea plants	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 100.00 \$ 2,500.00 \$ 800.00 \$ 800.00 \$ 15,000.00 \$ 100.	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000 66,500 3,200 11,800 900 60 1,980 1,861 1,750 7,200 216 28,967
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance Landscaping TOTAL FOR CHARLES STREET AREA SIGNALIZED INTERSECTION AREA Pedestrian barriers and control Demolition Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees Conduits for future signal & street lights Landscaping costs Fine grading 12" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots 3" gravel mulch under tree grates only 3" depth bark mulch, including installation Weed control fabric, installed (Includes underneath tree grates) 24" box trees (includes staking) 1 gallon groundcover Annuals 4" pot	3,200 118 9 100 3,300 3,721 5 800 72	ea sf sf allow If sf allow ea ea ls sf cy cy sf sf ea ea plants	\$ 24 \$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 100.00 \$ 2,500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 15,000.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 0.60 \$ 0.60 \$ 0.50 \$ 350.00 \$ 9.00 \$ 3000 Subtotal	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	96 16 483 \$67,393.29 1,000 575 7,870 500 8,945 47,500 4,000 15,000 66,500 3,200 11,800 900 60 1,980 1,861 1,750 7,200 216 28,967

14" tall seat walls with tile inserts	81	lf	S	125.00	T\$	10,125
2' tall concrete pilasters with tile inserts and cast stone caps	16	ea	\$	1,500.00		24,000
New peach/pink colored sidewalks with blue-green tile inlays	9,516		\$	8.00		76,128
New 4" concrete sidewalk w/ lamp black and hand seeded aggregate	180	sf	\$	8.00		1,440
Exicluding AC overlay	- 100	1	<u> </u>	ubtotal	\$	104,908
		1	 	abtotar	+*	104,900
Irrigation Costs		·	+		+	
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),		 	\vdash		┼	
system for shrubs/groundcovers/pots, water meters.	1	allow	6	15,000.00	\$	4E 000
	<u>-</u>	anow		ibtotal	\$	15,000
Site Furnishings		├	1 30	ibiotai	13	15,000
Wood benches	1	ea	\$	2,000.00	\$	0.000
Artistic bike racks	8	ea	\$	800.00	\$	2,000
Drinking fountain, custom with stonework	1		\$		-	6,400
Clay pot (includes drainlines)	18	ea		4,000.00	\$	4,000
3' tall ornamental steel fence	67	ea If	\$	800.00	\$	14,400
Cast stone trash receptacles	4		·	80.00	\$	5,360
Cast stone recycle bins	4	ea	\$	1,000.00	\$	4,000
Metal tree grates 5' square, painted custom color		ea	\$	2,000.00	\$	8,000
Black metal café table and chair set	4	ea	\$	1,000.00	\$	4,000
Umbrellas for café seating sets	9	ea	\$	800.00	\$	7,200
Custom walls incorporating news stands	9	ea	\$	200.00	\$	1,800
The state of the s	5	ea	\$	2,000.00	\$	10,000
Tree planting preparation costs (For new trees)			Su	btotal	\$	67,160
3' depth excavation of area to receive structural soil incl. offhaul	- 100		_		<u> </u>	
Structural soil at \$35/CY plus placement	122	су	\$	25.00	\$	3,050
Install 4* french drain(STR 35 pipe) for trench, connect to storm drain	122	су	\$	45.00	\$	5,490
mistal 4 Trener drain(31K 33 pipe) for trenen, connect to storm drain	70	lf	\$	35.00	\$	2,450
Landscape and sidewalk maintenance-6 months			Su	btotal	\$	10,990
Sidowalk and grocovalk atoms also in a sidowalk atoms al						
Sidewalk and crosswalk steam cleaning every 6 months Tree maintenance	9,516	sf	\$	0	65	2,379
Landscaping	13	ea	\$	24	\$	312
Annual color	3,200	_sf	\$	0	\$	384
Armuai color	72	sf	\$	3	\$	216
TOTAL FOR CIONAL			Su	btotal	\$	3,291
TOTAL FOR SIGNALIZED INTERSECTION AREA						\$306,760.50
UENDV CTDEET ADEA						
HENRY STREET AREA						
Pedestrian barriers and control	1	allow	\$	1.000.00	s	1 000

HENRY STREET AREA	· · · · · · · · · · · · · · · · · · ·	т	_			
Pedestrian barriers and control		 	 			
	1	allow	\$	1,000.00	\$	1,000
Demolition	·	 	-		<u> </u>	
Demo (E) Curb & Gutter	36	l lf	6	4.00	-	
Demo (E) Concrete sidewalk	212	sf	\$	1.00	\$	36
Small redwood to be removed	3	ea	\$	2,000.00	\$	212
Groundcover/shrub removal	270	sf	\$	0.30	\$	6,000
Irrigation system demolition (Remove valves and cap ex. lines only)	1	allow	\$	500.00	\$	81
	- 	allow	<u> </u>	btotal	\$	500
Lighting Costs	- 		Su	Diotai	*	6,829
14' height acorn pole lights (plain)	5	ea	\$	2,500.00	\$	40.500
Twinkle lights in trees	4	ea	\$	800.00	\$	12,500
		ea	<u> </u>	btotal	\$	3,200
Landscaping costs			Su	Diolai	<u> </u>	15,700
Fine grading	270	sf	\$	4.00		
12" depth topsoil import and spreading for groundcover & shrubs	270	_	\$	1.00	\$	270
Planter mix and installation in pots	1	су	\$		\$	27,000
3" depth bark mulch, including installation	270	cy sf	\$	100.00	\$	100
Weed control fabric, installed (Includes underneath tree grates)	270	sf		0.60	\$	162
24" box trees (includes staking)	4		\$	0.50	\$	135
1 gallon groundcover	67	ea	\$	350.00	\$	1,400
Annuals 4" pot	8	ea	\$	9.00	\$	603
		plant	\$	3.00	\$	24
Concrete work			Sui	ototal	\$	29,694
2" AC Overlay	3,750	sf	<u> </u>	0.00		
Curb & Gutter	300	- Si If	\$	2.00	\$	7,500
New vehicular 6" concrete sidewalk w/color and tile inlays	335	sf	\$	18.00	\$	5,400
New 4" concrete sidewalk w/ lamp black and hand seeded aggregate	1,591	sf	\$	12.00	\$	4,020
	1,591	51	<u> </u>	8.00	\$	12,728
			out	ototal	\$	16,748
Irrigation Costs						

The second secon

Drip irrigation system for trees, (IPS hose in sleeve between tree wells),				Ï	
system for shrubs/groundcovers/pots, water meters.	. 1	allow	\$ 5,000.00	\$	5,000
			Subtotal	\$	5,000
Site Furnishings					
Clay pots (includes drainlines)	2	ea	\$ 800.00	\$	1,600
			Subtotal	\$	1,600
Tree planting preparation costs (For new trees)					
3' depth excavation of area to receive structural soil incl. offhaul	89	су	\$ 25.00	\$	2,225
Structural soil at \$35/CY plus placement	89	су	\$ 45.00	\$	4,005
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	160	lf	\$ 35.00	\$	5,600
			Subtotal	\$	11,830
Landscape and sidewalk maintenance-6 months					
Sidewalk and crosswalk steam cleaning every 6 months	1,926	sf	\$ 0	\$	482
Tree maintenance	4	ea	\$ 24	\$	96
Landscaping	270	sf	\$ 0	\$	32
Annual color	8	sf	\$ 3	\$	24
			Subtotal	\$	634
TOTAL FOR HENRY STREET AREA					\$89,034.90

SOUTHEAST STREETSCAPE AREA	<u> </u>	i	I	I	
Pedestrian barriers and control	1	allow	\$ 1,000.00	\$	1.000
				一	
Demolition		i			
Demo (E) Curb & Gutter	94	If	\$ 1.00	\$	94
Demo (E) Concrete sidewalk	1,622	sf	\$ 1.00	\$	1,622
Sycamore removal (Includes stump removal typ.)	1	ea	\$ 1,500.00	\$	1,500
Irrigation system demolition (Remove valves and cap ex. lines only)	1	allow	\$ 500.00	\$	500
			Subtotal	\$	3,716
Lighting Costs					
14' height acom pole lights (plain)	4.	ea	\$ 2,500.00	\$	10,000
Twinkle lights in trees	. 5	ea	\$ 800.00	\$	4,000
			Subtotal	\$	14,000
Landscaping costs					
Fine grading	200	sf	\$ 1.00	\$	200
12" depth topsoil import and spreading for groundcover & shrubs	8	су	\$ 100.00	\$	800
Planter mix and installation in pots	1	су	\$ 100.00	\$	100
Weed control fabric, installed (Includes underneath tree grates)	200	sf	\$ 0.50	\$	100
1 gallon groundcover	50	ea	\$ 9.00	\$	450
			Subtotal	\$	1,650
Concrete work	1				
2" AC Overlay	2,400	sf	\$ 1.00	\$	2,400
Curb & Gutter	183	If	\$ 18.00	\$	3,294
New peach/pink colored sidewalks with blue-green tile inlays	544	sf	\$ 8.00	\$	4,352
New vehicular 6" concrete sidewalk w/color and tile inlays	216	sf	\$ 12.00	\$	2,592
Excluding AC overlay			Subtotal	\$	4,544
Irrigation Costs					
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),					
system for shrubs/groundcovers/pots, water meters.	1	allow	\$ 5,000,00	\$	5,000
*	1		Subtotal	\$	5,000
Tree planting preparation costs (Under sidewalk near redwood trees)	1				
3' depth excavation of area to receive structural soil incl. offhaul	89	су	\$ 25.00	\$	2,225
Structural soil at \$35/CY plus placement	89	CV	\$ 45.00	\$	4,005
	1		Subtotal	\$	6,230
Landscape and sidewalk maintenance-6 months				-	-,
Sidewalk and crosswalk steam cleaning every 6 months	544	sf	\$ 0	\$	82
Tree maintenance	10	ea	\$ 24	\$	240
Landscaping	200	sf	\$ 0	\$	24
	1		Subtotal	\$	346
TOTAL FOR SOUTHEAST STREETSCAPE AREA					\$36,485.60
		·			700,700.00

SOUTHWEST STREETSCAPE AREA		T	Γ		
Pedestrian barriers and control	1	allow	\$	1,000.00	\$ 1,000
Demolition		i i			

A J 4 (5) 1 1010 (5)						
Adjust (E) Utility Rim to grade Demo (E) Curb & Gutter	1			00.00	\$	1,000
Demo (E) Concrete sidewalk	94		\$	1.00	\$	94
Pear tree removal	1,622		\$	1.00	\$	1,622
Pear "boxes" to be removed NIC	2			00.00	\$	800
Irrigation system demolition (Remove valves and cap ex. lines only)	2			00.00	\$	1,000
inguish system demondon (itemove valves and cap ex. lines only)	1	allow		00.00	\$	500
Lighting Costs		↓	Subtot	al	\$	4,016
14' height acom pole lights (plain)		 				
Twinkle lights in trees	3	+		00.00	\$	7,500
Twinkle lights at trees	2	ea		00.00	\$	1,600
Landscaping costs		ļ	Subtot	al	\$	9,100
Fine grading						
12" depth topsoil import and spreading for groundcover & shrubs	250	sf	\$	1.00	\$	250
Planter mix and installation in pots	9	су		00.00	\$	900
3" gravel mulch under tree grates only	3	су		00.00	\$	300
3" depth bark mulch, including installation	50	sf	\$	0.60	\$	30
Wood control fabric installed (1-distance in the installed in the installe	250	sf	\$	0.60	\$	150
Weed control fabric, installed (Includes underneath tree grates) 24" box trees (includes staking)	250	sf	\$	0.50	\$	125
24 box trees (includes staking)	2	ea		50.00	\$	700
1 gallon groundcover	62	ea	\$	9.00	\$	558
Annuals 4" pot	24	plant		3.00	\$	72
		-	Subtota	ı	\$	3,085
Concrete work						
2" AC Overlay	2,307	sf	\$	1.00	\$	2,307
Curb & Gutter	195	If	\$	8.00	\$	3,510
New peach/pink colored sidewalks with blue-green tile inlays	2,092	sf	\$	8.00	\$	16,736
New vehicular 6" concrete sidewalk w/color and tile inlays	800	sf	\$	2.00	\$	9,600
Special paving to encourage window shopping	54	sf		20.00	\$	1,080
Excluding AC overlay		<u> </u>	Subtota		\$	24,029
					<u> </u>	
Irrigation Costs						
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),			<u> </u>			
system for shrubs/groundcovers/pots, water meters.	1	allow	\$ 5.00	0.00	\$	5,000
			Subtota		\$	5,000
Site Furnishings			Captota	•	Ψ	3,000
Wood benches	2	ea	\$ 2,00	0.00	\$	4 000
Artistic bike racks	1	ea			\$ \$	4,000
Clay pot (includes drainlines)	6	ea				800
Cast stone trash receptacles	1	ea			\$	4,800
Cast stone recycle bins	1			0.00		1,000
Metal tree grates 5' square, painted custom color		ea			\$	2,000
g also a aqual of balliton property color	11	ea			\$	11,000
Tree planting preparation costs (For new trees)	-i		Subtota		\$	23,600
3' depth excavation of area to receive structural soil incl. offhaul						
Structural soil at \$35/CY plus placement	114	су		5.00		2,850
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	114	су			\$	5,130
model 4 menor drain(5117 55 pipe) for trendit, conflect to storm drain	210	lf			\$	7,350
Landscape and sidewalk maintenance-6 months			Subtota		\$	15,330
Sidewalk and crosswalk steam cleaning every 2 months						
Landscaping	2,092	sf	\$		\$	314
Tree maintenance	250	sf	\$	0	\$	30
Annual color	2	ea	\$	24	\$	48
Attitual color	24	sf	\$	3 3	\$	72
			Subtotal		\$	464
TOTAL FOR SOUTHWEST STREETSCAPE AREA						\$85,623.80
						
BRIDGE AREA			·	<u> </u>		
Pedestrian barriers and control	1	allow	\$ 1,00	0.00	\$	1,000
			,00		<u> </u>	.,,,,,,
Demolition						
Demo (E) curb & gutter	100	If	\$	1.00		100
Demo (E) Concrete sidewalk	1,600	sf		1.00		1,600
rrigation system demolition (Remove valves and cap ex. lines only)	1	allow		0.00		500
	1 1		Subtotal	7.00		2,200
Trop planting properties and (F	- 				·	~,200
Tree planting preparation costs (For new trees)		су	\$ 25	5.00 \$		825
3' depth excavation of area to receive structural soil incl. offhaul	33		- 2:		<u> </u>	020
3' depth excavation of area to receive structural soil incl. offhaul Structural soil at \$35/CY plus placement	33	_				1 AQE
3' depth excavation of area to receive structural soil incl. offhaul Structural soil at \$35/CY plus placement	33	су	\$ 45	.00 \$		1,485
3' depth excavation of area to receive structural soil incl. offhaul		cy If	\$ 45		3	1,485 1,750 4,060

Bridge modification costs			\top			
Remove/ paint/ replace existing metal railing and posts	1	LS	1	10,000	e	10,000
Custom concrete lighted sentinels at bridge	4	ea	18	6,500	6	26,000
Patch/add existing 4" concrete sidewalk w/ peach colored pavement	1,072	sf	\$	8.00	\$	8,576
Move fire hydrant	1	ea	†*	3000	\$	3,000
TOTAL FOR BRIDGE AREA					\$	47,576
TOTAL FOR BRIDGE AREA						\$54,836.00

Project Cost Estimate - Alternate 2A- Oak Tree Roundabout Intersection

Project Name: Walkable Cotati Phase 1 Project Owner: City of Cotati Project Location: Cotati, CA	Project No.: Estimated by: Checked by: Date:	Ber	E99-7 ner/Wise tolero
Summary			
Mobilization		\$	50,000
Tree and root pruning & structural soil		\$	110,875
North Entry Traffic Calming		\$	208,915
Northeast Streetscape		\$	271,107
Northwest Streetscape		\$	289,292
Charles Street (Including AC overlay)		\$	66,881.29
Henry Street (Including AC overlay)		\$	101,934.90
Roundabout Intersection		\$	387,108
Southeast Streetscape		\$	42,180
Southwest Streetscape		\$	93,321
Bridge Area		\$	54,836
AC Overlay (From E. Cotati Ave. to the bridge, excluding Henry and Charles Streets)		\$	79,000
Subtotal		\$	1,755,449
Contingencies (25%)		\$	438,862
Public involvement, studies, engineering (15%)		\$	263,317
Construction-related support services (12%)		\$	210,654
Total		\$	2,668,282
Base Project Summary			
Note: Items include contingencies			
Mobilization		\$	25,000
Oak Tree Roundabout		\$	279,435
Tree Planting (existing trees only)		Ф \$	138,594
Repair additional uprooted sidewalk		\$	37,500
AC overlay		\$	50,448
Total (excluding studies/engineering)		\$	530,977

ltem	Quantity	Units	Engine	ring =	stimate
	- Lucinity	"""	Unit Cost	,,,,, <u>,,,</u>	Total
TREE AND ROOT PRUNING & SOIL PREP. (For 14 sycamores and 1 redwood	1)	 	Jim Oost	+-	Total
3' depth excavation of area to receive structural soil incl. offhaul	350	су	\$ 25.00	-	8,750
Pneumatic excavation of root zone of existing trees	15	ea	\$ 1,000.00		15,000
Root pruning	15	ea	\$ 150.00		2,250
Crown reduction	15	ea	\$ 500.00		7,500
Structural soil at \$35/CY plus placement	350	су	\$ 45.00	\$	15,750
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	400	lf	\$ 35.00		14,000
Patch/add existing 4" concrete sidewalk w/ peach colored concrete	2,550	sf	\$ 8.00	\$	20,400
Twinkle lights in trees	15	ea	\$ 800.00	\$	12,000
3" gravel mulch under tree grates only	375	sf	\$ 0.60		225
Metal tree grates 5' square, painted custom color	15	ea	\$ 1,000.00	\$	
grant of the state	13	<u> ca</u>	Subtotal	1-2	15,000 110,875.00
		r	Gubiotai	├	110,675.00
NORTH ENTRY TRAFFIC CALMING		-			
Pedestrian barriers and control	1	allow	\$ 1,500.00	\$	4 500
		anow	¥ 1,500.00	13	1,500
Demolition				 	
Adjust (E) Utility Rim to grade	3	ea	\$ 1,000.00	\$	3,000
Demo (E) Curb & Gutter	341	If	\$ 1.00		3,000
Demo (E) Concrete Paving	350	sf	\$ 3.00	\$	1,050
Demo (E) Concrete sidewalk	4,248	sf	\$ 1.00	\$	4,248
Sycamore removal (Includes stump removal typ.)	4	ea	\$ 1,500.00	\$	6,000
			Subtotal	\$	14,639
Lighting Costs				 * 	17,000
14' height acom pole lights (plain)	18	ea	\$ 2,500.00	\$	45,000
Sentinel light in median	1	ea	\$ 7,500.00	\$	7,500
	·		Subtotal	\$	52,500
Landscaping costs			Oubtotal	+	32,300
Fine grading	1,279	sf	\$ 1.00	\$	1,279
12" depth topsoil import and spreading for groundcover & shrubs	47	cy	\$ 100.00	\$	4,700
Planter mix and installation in pots	8	cy	\$ 100.00	\$	800
3" gravel mulch under tree grates only	50	sf	\$ 0.60	\$	30
3" depth bark mulch, including installation	1,179	sf	\$ 0.60	\$	707
Weed control fabric, installed (Includes underneath tree grates)	1,179	sf	\$ 0.50	\$	590
24" box trees (includes staking)	6	ea	\$ 350.00	\$	2,100
New lawn in plaza	115	sf	\$ 330.00	\$	115
1 gallon groundcover	294	ea	\$ 9.00	\$	2,646
Annuals 4" pot	637	plant	\$ 3.00	\$	
	- 037	Platit			1,911
Concrete work		- i	Subtotal	\$	14,978
Curb & Gutter	650	- le -	¢ 40.00	•	44 700
Curb & Gutter (Center Island)	650	lf l	\$ 18.00	\$	11,700
2" Ac Overlay	12 942	If of	\$ 15.00	\$	2,160
14" tall seat walls with tile inserts	12,812	sf	\$ 1.00		12,812
2' tall concrete pilasters with tile inserts and cast stone caps (Roundabout NIC)	34	lf	\$ 125.00		4,250
New peach/pink colored cidawello with him and Cast Stone caps (Roundabout NIC)	4	ea	\$ 1,500.00	\$	6,000
New peach/pink colored sidewalks with blue-green tile inlays	3,110	sf	\$ 8.00	\$	24,880
New 4" concrete sidewalk w/ lamp black and hand seeded aggregate	2,031	sf	\$ 8.00	\$	16,248
Special paving to encourage window shopping	114	sf	\$ 20.00	\$	2,280
Excluding AC overlay			Subtotal	\$	67,518
L.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					

Irrigation Costs	<u> </u>	Γ -	· · · · ·		v
Drip irrigation system for trees, (IPS hose in sleeve between tree wells), spra	v irrigation	 		+	
system for shrubs/groundcovers/pots water meters.	1	allow	\$ 5,000.00	\$	5,000
			Subtotal	\$	5,000
Site Furnishings			- Cubtotai	┪	
Wood benches	1	ea	\$ 2,000.00	s	2,000
Artistic bike racks	3	ea	\$ 800.00		2,400
Clay pot (includes drainlines)	8	ea	\$ 800.00		6,400
Cast stone trash receptacles	2	ea	\$ 1,000.00	<u> </u>	2,000
Cast stone recycle bins	2	ea	\$ 2,000.00		4,000
Cast stone ash ums	2	ea	\$ 1,000.00		2,000
Metal tree grates 5' square, painted custom color	3	ea	\$ 1,000.00	<u> </u>	3,000
		- 00	Subtotal	\$	21,800
Tree planting preparation costs			Cubtotai	+ -	21,000
3' depth excavation of area to receive structural soil incl. offhaul	339	су	\$ 25.00	\$	8,475
Structural soil at \$35/CY plus placement	339	CV	\$ 45.00	· ·	15,255
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	210	lf	\$ 35.00	<u> </u>	7,350
			Subtotal	\$	31,080
Landscape and sidewalk maintenance-6 months			 	+	31,000
Sidewalk and crosswalk steam cleaning every 6 months	5,141	sf	\$ 0	\$	1,285
Landscaping	1,504	sf	\$ 0	\$	180
Annual color	325	sf	\$ 3	\$	975
	320		Subtotal	\$	2,441
TOTAL FOR NORTH ENTRY TRAFFIC CALMING AREA	1			1 V	*****
		Т		- 2	208,915
				1	

NORTHEAST STREETSCAPE AREA	1			Т"	
Pedestrian barriers and control	1	allow	\$ 1,000.00	\$	1,00
Domolliston				T	
Demolition Demo (E) Curb & Gutter					
Demo (E) Concrete sidewalk	291		\$ 1.00		29
Pear tree removal	4,520		\$ 1.00	\$	4,52
Pear "boxes" to be removed NIC	1 1		\$ 400.00		40
Groundcover/shrub removal	1	+	\$ 400.00		40
Irrigation system demolition (Remove valves and cap ex. lines only)	240	sf	\$ 0.30	<u> </u>	7
ingular system demonstrative valves and cap ex. lines only)	1 1	allow	\$ 500.00	Ť	50
Lighting Costs			Subtotal	\$	6,18
14' height acom pole lights (plain)	 	ļ		╁	
Twinkle lights in trees	9	ea	\$ 2,500.00		22,50
TWINTO HIGHE IT LOCO	7	ea	\$ 800.00		5,6 0
Landscaping costs		 	Subtotal	\$	28, 10
Fine grading		 		1	
12" depth topsoil import and spreading for groundcover & shrubs	252	sf	\$ 1.00		25
Planter mix and installation in pots	9	су	\$ 100.00		90
3" gravel mulch under tree grates only	7	cy	\$ 100.00		70
3" depth bark mulch, including installation	25	sf	\$ 0.60	+	1
Weed control fabric, installed (Includes underneath tree grates)	252	sf	\$ 0.60		15
24" box trees (includes staking)	277	sf	\$ 0.50	+	13
1 gallon groundcover	7	ea	\$ 350.00	<u> </u>	2,45
Annuals 4" pot	50	ea	\$ 9.00	\$	450
Annuals 4 pot	52	plants	\$ 3.00	\$	150
Concrete work	ļ		Subtotal	\$	5,213
2" AC Overlay				<u>L_</u>	
Curb & Gutter	6,275	sf	\$ 1.00	\$	6,275
	406	lf	\$ 18.00		7,308
14" tall seat walls with tile inserts	22	lf	\$ 125.00	\$	2,750
2' tall concrete pilasters with tile inserts and cast stone caps (Roundabout NIC)	3	ea	\$ 1,500.00	\$	4,500
Small street fountain, 6' diameter, 16 ' tall w/ cast stone cap & tile inserts	1	ea	\$ 20,000.00	\$	20,000
New peach/pink colored sidewalks with blue-green tile inlays	6,330	sf	\$ 8.00	\$	50,6 40
New vehicular 6" concrete sidewalk w/color and tile inlays	100	sf	\$ 12.00	\$	1,200
Special sidewalk for window shopping	390	sf	\$ 8.00	\$	3,120
Excludes AC overlay			Subtotal	\$	89, 518
-1					
rrigation Costs					
Orip irrigation system for trees, (IPS hose in sleeve between tree wells),	L				
system for shrubs/groundcovers/pots, water meters.	1	allow	\$ 10,000.00	\$	10,000
24. [Subtotal	\$	10,000
Site Furnishings					
Artistic bike racks	1	ea	\$ 800.00	\$	800
Metal pedestrian passageway enhancements-large, aluminum	2	ea	\$ 7,000.00	\$	14,000
Metal pedestrian passageway enhancement-Ismall, aluminum	1	ea	\$ 3,500.00		3,500
Clay pot (includes drainlines)	13	ea	\$ 800.00	\$	10,400
Cast stone trash receptacles	. 1	ea	\$ 1,000.00		1,000
3' tall ornamental steel fence	152	If	\$ 80.00	\$	12,160
Cast stone recycle bins	1	ea	\$ 2,000.00		2,000
Cast stone ash urns	1	ea	\$ 1,000.00		1,000
Metal tree grates 5' square, painted custom color	1	ea		\$	1,000
Black metal café table and chair set	63	ea	\$ 800.00	\$	50 ,400
Imbrellas for café seating sets	23	ea	\$ 200.00	\$	4,600
		ea	\$ 2,000.00	\$	2,000
Custom walls incorporating news stands	1				
custom walls incorporating news stands	1	 +		\$	7117 XMI
custom walls incorporating news stands ree planting preparation costs (For new trees)	1		Subtotal	\$	102,860
ree planting preparation costs (For new trees) depth excavation of area to receive structural soil incl. offhaul	264		Subtotal		
ree planting preparation costs (For new trees) depth excavation of area to receive structural soil incl. offhaul	264	су	Subtotal \$ 25.00	\$	6,600
ree planting preparation costs (For new trees) depth excavation of area to receive structural soil incl. offhaul	264 264	cy cy	\$ 25.00 \$ 45.00	\$ \$	6,6 00 11, 880
ree planting preparation costs (For new trees) depth excavation of area to receive structural soil incl. offhaul structural soil at \$35/CY plus placement estall 4" french drain(STR 35 pipe) for trench, connect to storm drain	264	cy cy If	\$ 25.00 \$ 45.00 \$ 35.00	\$ \$	6,600 11,880 7,700
ree planting preparation costs (For new trees) depth excavation of area to receive structural soil incl. offhaul structural soil at \$35/CY plus placement estall 4" french drain(STR 35 pipe) for trench, connect to storm drain andscape and sidewalk maintenance-6 months	264 264	cy cy If	\$ 25.00 \$ 45.00	\$ \$	6,600 11,880 7,700
ree planting preparation costs (For new trees) depth excavation of area to receive structural soil incl. offhaul structural soil at \$35/CY plus placement estall 4" french drain(STR 35 pipe) for trench, connect to storm drain andscape and sidewalk maintenance-6 months didewalk and crosswalk steam cleaning every 6 months	264 264 220	cy cy If	\$ 25.00 \$ 45.00 \$ 35.00 Subtotal	\$ \$ \$	6,600 11,880 7,700 26,180
ree planting preparation costs (For new trees) depth excavation of area to receive structural soil incl. offhaul structural soil at \$35/CY plus placement estall 4" french drain(STR 35 pipe) for trench, connect to storm drain	264 264	cy cy If	\$ 25.00 \$ 45.00 \$ 35.00 Subtotal \$ 0	\$ \$ \$	6,600 11,880 7,700 26,18 0
ree planting preparation costs (For new trees) depth excavation of area to receive structural soil incl. offhaul structural soil at \$35/CY plus placement estall 4" french drain(STR 35 pipe) for trench, connect to storm drain andscape and sidewalk maintenance-6 months didewalk and crosswalk steam cleaning every 6 months	264 264 220 6,820	cy cy If	\$ 25.00 \$ 45.00 \$ 35.00 Subtotal \$ 0 \$ 24	\$ \$ \$ \$	102,860 6,600 11,880 7,700 26,180 1,705 168
ree planting preparation costs (For new trees) depth excavation of area to receive structural soil incl. offhaul structural soil at \$35/CY plus placement estall 4" french drain(STR 35 pipe) for trench, connect to storm drain andscape and sidewalk maintenance-6 months didewalk and crosswalk steam cleaning every 6 months free maintenance	264 264 220 6,820 7 200	cy cy If	\$ 25.00 \$ 45.00 \$ 35.00 Subtotal \$ 0 \$ 24	\$ \$ \$ \$ \$	6,600 11,880 7,700 26,180 1,705 168 24
ree planting preparation costs (For new trees) depth excavation of area to receive structural soil incl. offhaul structural soil at \$35/CY plus placement estall 4" french drain(STR 35 pipe) for trench, connect to storm drain andscape and sidewalk maintenance-6 months didewalk and crosswalk steam cleaning every 6 months free maintenance andscaping	264 264 220 6,820	cy cy If	\$ 25.00 \$ 45.00 \$ 35.00 Subtotal \$ 0 \$ 24	\$ \$ \$ \$	6,600 11,880 7,700 26, 180 1,705 168

NORTHWEST STREETSCAPE AREA			<u>r</u>	т-	
Pedestrian barriers and control	1	allow	\$ 1,000.00	5	1,000
	 	3044	1,000.00	†	1,000
Demolition			 		
Demo (E) Curb & Gutter	272	lf	\$ 1.00		272
Demo (E) Concrete sidewalk	5,260	sf	\$ 1.00		5,260
Groundcover/shrub removal	50	sf	\$ 0.30		15
Irrigation system demolition (Remove valves and cap ex. lines only)	1	allow	\$ 500.00		500
Lighting Costs			Subtotal	\$	6,047
14' height acom pole lights (plain)	 	-	¢ 0.500.00	 	
14 height acont pole lights (plain)	9	ea	\$ 2,500.00 Subtotal	\$	22,500
Landscaping costs		-	Subtotai	\$	22,500
Fine grading	263	sf	\$ 1.00	\$	262
12" depth topsoil import and spreading for groundcover & shrubs	263	Cy	\$ 100.00		263 26,300
Planter mix and installation in pots	7	cy	\$ 100.00		700
3" depth bark mulch, including installation	263	sf	\$ 0.60		158
Weed control fabric, installed (Includes underneath tree grates)	263	sf	\$ 0.50	+	132
24" box trees (includes staking)	7	ea	\$ 350.00		2,450
1 gallon groundcover	66	ea	\$ 9.00	_	594
Annuals 4" pot	56	plant	\$ 3.00	\$	168
			Subtotal	\$	30,764
Concrete work				Ť	
2" AC Overlay	6,051	sf	\$ 1.00	\$	6,051
Curb & Gutter	409	lf	\$ 18.00	\$	7,362
Passageway enhancement:4' tall concrete pilasters w/ tile inlay& tubular steel	1	ea	\$ 30,000.00	\$	30,000
New peach/pink colored sidewalks with blue-green tile inlays	7,448	sf	\$ 8.00	\$	59,584
New vehicular 6" concrete sidewalk w/color and tile inlays	100	sf	\$ 12.00	\$	1,200
Excludes AC overlay			Subtotal	\$	98,146
Irrigation Costs					
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),					
system for shrubs/groundcovers/pots, water meters.	1	allow	\$ 10,000.00	\$	10,0 00
		<u> </u>	Subtotal	\$	1 0,0 00
Site Furnishings	1	<u> </u>			
Wood benches	3	ea	\$ 2,000.00	\$	6,000
Artistic bike racks 3' tall ornamental steel fence	2	ea	\$ 800.00	\$	1,600
Clay pot (includes drainlines)	128	lf	\$ 80.00	\$	1 0, 240
	14	ea	\$ 800.00	\$	11,200
Cast stone trash receptacles Cast stone recycle bins	1 1	ea	\$ 1,000.00	\$	1,000
Black metal café table and chair set	1 1	ea	\$ 2,000.00	\$	2,000
Mailboxes, FedEx boxes, etc	18	€a	\$ 800.00	\$	14,400
Umbrellas for café seating sets	4	ea	NIC 000.00		0.000
Flower kiosk	18	ea	\$ 200.00 \$ 30.000.00		3,600
Custom walls incorporating news stands	8	ea	\$ 30,000.00 \$ 2,000.00	_	30, 000
Table incorporating note stands	- 0	ea	Subtotal	\$	16,000 96,040
Tree planting preparation costs (For new trees)			Subiolai	*	90,040
3' depth excavation of area to receive structural soil incl. offnaul	217	CV	\$ 25.00	\$	5,425
Structural soil at \$35/CY plus placement	217	cy cy	\$ 45.00		9,765
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	210	If	\$ 35.00	\$	7,350
	 	••	Subtotal	\$	22,540
Landscape and sidewalk maintenance-6 months	†	-		-	
Sidewalk and crosswalk steam cleaning every 6 months	7,548	sf	\$ 0	\$	1,887
Tree maintenance	7	ea	\$ 24	\$	168
Landscaping	263	sf	\$ 0	_	32
Annual color		ε. .	\$ 3	\$	168
Attitual Color	56			\$	2,255
	56		Subtotal		
	56		Subtotal	<u></u>	\$289, 291.8 6
TOTAL FOR NORTHWEST STREETSCAPE AREA	56		Subtotal		\$289, 291.8 6
TOTAL FOR NORTHWEST STREETSCAPE AREA CHARLES STREET AREA					
TOTAL FOR NORTHWEST STREETSCAPE AREA CHARLES STREET AREA Pedestrian barriers and control	1	allow	\$ 1,000.00	\$	\$289, 291 .86
TOTAL FOR NORTHWEST STREETSCAPE AREA CHARLES STREET AREA Pedestrian barriers and control Lighting Costs				\$	
TOTAL FOR NORTHWEST STREETSCAPE AREA CHARLES STREET AREA Pedestrian barriers and control Lighting Costs 14' height acom pole lights (plain)					
TOTAL FOR NORTHWEST STREETSCAPE AREA CHARLES STREET AREA Pedestrian barriers and control Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees	1	allow	\$ 1,000.00	\$	

Fine grading		ļ		_1	
40% domah Anna II ing a kanananan ang ang ang ang ang ang ang ang	132	sf	\$ 1.00	\$	132
12" depth topsoil import and spreading for groundcover & shrubs	5	су	\$ 100.00		500
3" gravel mulch under tree grates only	25		\$ 0.60	→ <u> </u>	15
3" depth bark mulch, including installation	132		\$ 0.60	<u> </u>	
Weed control fabric, installed (Includes underneath tree grates)	182				79
24" box trees (includes staking)		sf			91
1 gallon groundcover	4	ea	\$ 350.00		1,400
1 gallon groundcover	33	ea	\$ 9.00	\$	297
		1	Subtotal	\$	2,514
Concrete work				1	
2" AC Overlay	1,800	sf	\$ 2.00	\$	3,600
Curb & Gutter	228	lf	\$ 18.00		
New vehicular 6" concrete sidewalk w/color and tile inlays					4,104
New 4" concrete sidewalk w/ lamp black and hand seeded aggregate	120	sf	\$ 12.00	_	1,440
How 4 concrete sidewalk will famp black and hand seeded aggregate	1,485	sf	\$ 8.00	\$	11,880
D		<u>L</u>	Subtotal	\$	21,024
Demolition			1	T'''	
Demo (E) Curb & Gutter	96	lf	\$ 1.00	\$	96
Demo (E) Concrete sidewalk	512	sf	\$ 1.00	_	
		-31			512
Irrigation Costs		├	Subtotal	\$	1,218
Drin irrigation quaters for two - (IDQ t					
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),		<u> </u>	!	1	
system for shrubs/groundcovers/pots, water meters.	1	allow	\$ 5,000.00	\$	5,000
			Subtotal	\$	5,000
Site Furnishings		 	Juniolai	+	5,000
Metal tree grates 5' square, painted custom color	 		C 4000.00	-	
- Same a second pairmon onoton color	1 1	ea	\$ 1,000.00	\$	1,000
Tree planting preparation costs			Subtotal	\$	1,000
old-" preparation costs		İ	<u> </u>	1	
3' depth excavation of area to receive structural soil incl. offhaul	178	су	\$ 25.00	\$	4,450
Structural soil at \$35/CY plus placement	178	су	\$ 45.00		8,010
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	220	If		\$	
		'' -		<u> </u>	7,700
Landscape and sidewalk maintenance-6 months	- 		Subtotal	\$	20,160
Sidewalk and crosswalk steam cleaning every 6 months					
Tree maintenance	1,485	sf	\$ 0	\$	371
nee mantenance					
	4	ea	\$ 24	\$	96
Landscaping	132	ea sf			
Landscaping			\$ 0	\$	16
Landscaping					16 483
			\$ 0	\$	16
Landscaping TOTAL FOR CHARLES STREET AREA			\$ 0	\$	16 483
TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA	132		\$ 0 Subtotal	\$	16 483
Landscaping TOTAL FOR CHARLES STREET AREA			\$ 0	\$	16 483
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control	132	sf	\$ 0 Subtotal	\$	16 483 \$66,881.29
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition	132	sf	\$ 0 Subtotal	\$	16 483 \$66,881.29
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition	132	sf	\$ 0 Subtotal \$ 1,000.00	\$	16 483 \$66,881.29 1,000
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control	132	allow	\$ 0 Subtotal \$ 1,000.00 \$ 8,000.00	\$ \$	16 483 \$66,881.29 1,000
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter	132 1 1 1 575	allow Is	\$ 0 Subtotal \$ 1,000.00 \$ 8,000.00 \$ 1.00	\$ \$ \$	16 483 \$66,881.29 1,000 8,000 575
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk	132 1 1 1 575 7,700	allow Is If	\$ 0 Subtotal \$ 1,000.00 \$ 8,000.00 \$ 1.00 \$ 1.00	\$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade	132 1 1 575 7,700 6	allow Is If sf ea	\$ 0 Subtotal \$ 1,000.00 \$ 8,000.00 \$ 1.00 \$ 1.00 \$ 1,000.00	\$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving	132 1 1 1 575 7,700	allow Is If sf ea sy	\$ 0 Subtotal \$ 1,000.00 \$ 1,000 \$ 1.00 \$ 1,000.00 \$ 3.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC	132 1 1 575 7,700 6	allow Is If sf ea sy sy	\$ 0 Subtotal \$ 1,000.00 \$ 8,000.00 \$ 1.00 \$ 1.00 \$ 1,000.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade	132 1 1 575 7,700 6	allow Is If sf ea sy	\$ 0 Subtotal \$ 1,000.00 \$ 1,000 \$ 1.00 \$ 1,000.00 \$ 3.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468
TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only)	132 1 1 575 7,700 6 156	allow Is If sf ea sy sy	\$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1,000.00 \$ 1,000.00 \$ 1,000.00 \$ 1.00	\$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 -
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs	132 1 1 575 7,700 6 156	allow Is If sf ea sy sy	\$ 0 Subtotal \$ 1,000.00 \$ 1,000 \$ 1.00 \$ 1,000.00 \$ 1,000.00 \$ 3.00 \$ 1.00 \$ 500.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs	132 1 1 575 7,700 6 156	allow Is If sf ea sy sy allow	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1,000.00 \$ 3.00 \$ 1.00 \$ 500.00 \$ 500.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243
TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain)	132 1 1 575 7,700 6 156 1 1	allow Is If sf ea sy sy allow ea	\$ 0 Subtotal \$ 1,000.00 \$ 1,000 \$ 1.00 \$ 1,000.00 \$ 1,000.00 \$ 3.00 \$ 1.00 \$ 500.00 Subtotal	\$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243
TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees	132 1 1 575 7,700 6 156 1 1 16 5	allow Is If If If Sf ea Sy Sy allow ea ea	\$ 0 Subtotal \$ 1,000.00 \$ 1,000 \$ 1.00 \$ 1,000.00 \$ 3.00 \$ 1.00 \$ 500.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00	\$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees	132 1 1 575 7,700 6 156 1 1	allow Is If sf ea sy sy allow ea	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1,000.00 \$ 3.00 \$ 1,000.00 \$ 500.00 \$ 500.00 \$ 500.00 \$ 800.00 \$ 2,000.00	\$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243
TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Fwinkle lights in trees Jplighting for oak in roundabout	132 1 1 575 7,700 6 156 1 1 16 5	allow Is If If If Sf ea Sy Sy allow ea ea	\$ 0 Subtotal \$ 1,000.00 \$ 1,000 \$ 1.00 \$ 1,000.00 \$ 3.00 \$ 1.00 \$ 500.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00	\$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees Jplighting for oak in roundabout Landscaping costs	132 1 1 575 7,700 6 156 1 1 16 5	allow Is If If If Sf ea Sy Sy allow ea ea	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1,000.00 \$ 3.00 \$ 1,000.00 \$ 500.00 \$ 500.00 \$ 500.00 \$ 800.00 \$ 2,000.00	\$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 6,000
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees Jplighting for oak in roundabout Landscaping costs Fine grading	132 1 1 575 7,700 6 156 1 1 16 5	allow Is If sf ea sy sy allow ea ea ea	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1,000.00 \$ 3.00 \$ 1,000.00 \$ 500.00 \$ 500.00 \$ 800.00 \$ 2,000.00 Subtotal	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 6,000 44,000
TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs L4' height acom pole lights (plain) Twinkle lights in trees Jplighting for oak in roundabout Landscaping costs Fine grading	132 1 1 575 7,700 6 156 1 16 5 3 3,671	allow Is If	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 500.00 \$ 3.00 \$ 500.00 \$ \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 2,000.00 Subtotal	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 6,000 44,000 3,671
TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees Uplighting for oak in roundabout Landscaping costs Tine grading 2" depth topsoil import and spreading for groundcover & shrubs	132 1 1 575 7,700 6 156 1 1 16 5 3 3,671 136	allow Is If	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1.00 \$ 1,000.00 \$ 3.00 \$ 1.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 2,000.00 Subtotal \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 4,000 4,000 44,000 3,671 13,600
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs I4' height acom pole lights (plain) Fwinkle lights in trees Jplighting for oak in roundabout Landscaping costs Fine grading 2" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots	132 1 1 575 7,700 6 156 1 1 16 5 3 3,671 136 5	allow Is If sf ea sy sy allow ea ea ea ea cy cy cy	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 500.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 2,000.00 Subtotal \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00 \$ 1.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 4,000 4,000 44,000 3,671 13,600 500
TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees Jplighting for oak in roundabout Landscaping costs Fine grading 2" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots Figravel mulch under tree grates only	132 1 1 575 7,700 6 156 1 1 16 5 3 3,671 136 5 100	allow Is If sf ea sy sy allow ea ea ea ea cy cy sf	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1.00 \$ 1,000.00 \$ 3.00 \$ 1.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 2,000.00 Subtotal \$ 1.00 \$ 1	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 4,000 4,000 4,000 3,671 13,600 500 60
TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs I4' height acom pole lights (plain) Fwinkle lights in trees Jplighting for oak in roundabout Landscaping costs Fine grading 2" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots I" gravel mulch under tree grates only I" depth bark mulch, including installation	132 1 1 575 7,700 6 156 1 1 16 5 3 3,671 136 5 100 3,671	allow Is If sf ea sy sy allow ea ea ea ea cy cy cy	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1.00 \$ 1,000.00 \$ 3.00 \$ 1.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 2,000.00 Subtotal \$ 1.00 \$ 0.60	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 4,000 4,000 44,000 3,671 13,600 500
TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 4' height acorn pole lights (plain) Winkle lights in trees Jplighting for oak in roundabout Landscaping costs Time grading 2" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots " gravel mulch under tree grates only " depth bark mulch, including installation Veed control fabric, installed (Includes underneath tree grates)	132 1 1 575 7,700 6 156 1 1 16 5 3 3,671 136 5 100	allow Is If sf ea sy sy allow ea ea ea ea cy cy sf	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1.00 \$ 1,000.00 \$ 3.00 \$ 1.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 2,000.00 Subtotal \$ 1.00 \$ 1	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 4,000 4,000 44,000 3,671 13,600 500 60 2,203
TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 4' height acom pole lights (plain) winkle lights in trees Uplighting for oak in roundabout andscaping costs ine grading 2" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots " gravel mulch under tree grates only " depth bark mulch, including installation Veed control fabric, installed (Includes underneath tree grates) 4" box trees (includes staking)	132 1 1 575 7,700 6 156 1 1 16 5 3 3,671 136 5 100 3,671 3,771	allow Is If sf ea sy sy allow ea ea ea ea cy cy sf sf sf	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1.00 \$ 1,000.00 \$ 3.00 \$ 1.00 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 2,000.00 Subtotal \$ 1.00 \$ 1	* * * * * * * * * * * * * * * * * * * *	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 4,000 44,000 3,671 13,600 500 60 2,203 1,886
TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 4' height acom pole lights (plain) winkle lights in trees Uplighting for oak in roundabout andscaping costs ine grading 2" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots " gravel mulch under tree grates only " depth bark mulch, including installation Veed control fabric, installed (Includes underneath tree grates) 4" box trees (includes staking)	132 1 1 575 7,700 6 156 1 1 16 5 3 3,671 136 5 100 3,671 3,771 5	allow Is If sf ea sy sy allow ea ea ea ea sf cy cy sf sf ea ea	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1,000.00 \$ 1,000.00 \$ 3.00 \$ 1,000 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 2,000.00 Subtotal \$ 1.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 100.00 \$ 350.00 \$ 350.00 \$ 350.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 6,000 44,000 500 60 2,203 1,886 1,750
TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 4' height acom pole lights (plain) winkle lights in trees Uplighting for oak in roundabout andscaping costs Fine grading 2" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots "" gravel mulch under tree grates only " depth bark mulch, including installation Veed control fabric, installed (Includes underneath tree grates) 4" box trees (includes staking) gallon groundcover	132 1 1 575 7,700 6 156 1 16 5 3 3,671 136 5 100 3,671 3,771 5 917	allow Is If sf ea sy allow ea ea ea cy cy sf sf sf ea ea	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1,000.00 \$ 1,000.00 \$ 3.00 \$ 1,000 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 2,000.00 Subtotal \$ 1.00 \$ 100.	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 4,000 44,000 3,671 13,600 500 60 2,203 1,886 1,750 8,253
ACOUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 4' height acom pole lights (plain) winkle lights in trees Uplighting for oak in roundabout Landscaping costs ine grading 2" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots " gravel mulch under tree grates only " depth bark mulch, including installation Veed control fabric, installed (Includes underneath tree grates) 4" box trees (includes staking) gallon groundcover	132 1 1 575 7,700 6 156 1 16 5 3 3,671 136 5 100 3,671 3,771 5 917	allow Is If sf ea sy sy allow ea ea ea ea sf cy cy sf sf ea ea	\$ 1,000.00 \$ 1,000.00 \$ 1.00 \$	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 6,000 44,000 5,000 60 2,203 1,886 1,750 8,253 441
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Winkle lights in trees Julighting for oak in roundabout Landscaping costs ine grading 2" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots " gravel mulch under tree grates only " depth bark mulch, including installation Veed control fabric, installed (Includes underneath tree grates) 14" box trees (includes staking) gallon groundcover Manuals 4" pot	132 1 1 575 7,700 6 156 1 16 5 3 3,671 136 5 100 3,671 3,771 5 917	allow Is If sf ea sy allow ea ea ea cy cy sf sf sf ea ea	\$ 0 Subtotal \$ 1,000.00 \$ 1,000.00 \$ 1.00 \$ 1,000.00 \$ 1,000.00 \$ 3.00 \$ 1,000 \$ 500.00 Subtotal \$ 2,500.00 \$ 800.00 \$ 2,000.00 Subtotal \$ 1.00 \$ 100.	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 4,000 44,000 3,671 13,600 500 60 2,203 1,886 1,750 8,253
Landscaping TOTAL FOR CHARLES STREET AREA ROUNDABOUT INTERSECTION AREA Pedestrian barriers and control Demolition Adjust (E) Storm Drainage Demo (E) Curb & Gutter Demo (E) Concrete sidewalk Adjust (E) Utility Rim to grade Demo (E) Concrete Paving Demo (E) Concrete sidewalk NIC rrigation system demolition (Remove valves and cap ex. lines only) Lighting Costs 14' height acom pole lights (plain) Twinkle lights in trees Jplighting for oak in roundabout Landscaping costs Fine grading 2" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots	132 1 1 575 7,700 6 156 1 16 5 3 3,671 136 5 100 3,671 3,771 5 917	allow Is If sf ea sy allow ea ea ea cy cy sf sf sf ea ea	\$ 1,000.00 \$ 1,000.00 \$ 1.00 \$	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	16 483 \$66,881.29 1,000 8,000 575 7,700 6,000 468 - 500 23,243 40,000 4,000 6,000 44,000 5,000 60 2,203 1,886 1,750 8,253 441

Landscaping costs

gallon groundcover nnuals 4" pot concrete work	67 8	plant	\$ 9.00 \$ 3.00 Subtotal	\$ \$	603 24 29,694
				<u> </u>	
	j 67 l	ea i	\$ 9.00	5	603
4" box trees (includes staking)	4	ea	\$ 350.00	\$	1,400
Veed control fabric, installed (Includes underneath tree grates)	270	sf	\$ 0.50	\$ \$	162 135
depth bark mulch, including installation	270	cy sf	\$ 100.00 \$ 0.60	\$	100
Planter mix and installation in pots	270	су	\$ 100.00	\$	27,000
2" depth topsoil import and spreading for groundcover & shrubs	270	sf	\$ 1.00	\$	270
andscaping costs ine grading]			
andecaning coets			Subtotal	\$	15,700
winkle lights in trees	4	ea	\$ 800.00		3,200
4' height acom pole lights (plain)	5	ea	\$ 2,500.00	\$	12,500
Ighting Costs				Γ	
			Subtotal	\$	6,829
rrigation system demolition (Remove valves and cap ex. lines only)	1	allow	\$ 500.00	\$	500
Groundcover/shrub removal	270	sf	\$ 0.30	\$	<u>6,000</u> 81
Small redwood to be removed	3	ea	\$ 2,000.00		212 6,000
Demo (E) Concrete sidewalk	212	sf	\$ 1.00 \$ 1.00		36
Demo (E) Curb & Gutter	36	If	\$ 1.00	e	
Demolition		<u> </u>		⊢	
The state of the s		allow	\$ 1,000.00	\$	1,000
Pedestrian barriers and control					
IENRY STREET AREA				,	
					\$387,107.87
TOTAL FOR ROUNDABOUT INTERSECTION AREA		<u> </u>	Subtotal	\$	3,362
	147	sf	\$ 3	<u> </u>	441
Annual color	3,671	sf	\$ 0		441
Landscaping	13	ea	\$ 24		312
Tree maintenance	8,673	sf	\$ 0		2,168
Sidewalk and crosswalk steam cleaning every 6 months	 	<u> </u>		<u> </u>	
Landscape and sidewalk maintenance-6 months			Subtotal	\$	15,990
nstall 4" french drain(STR 35 pipe) for trench, connect to storm drain	70	lf	\$ 35.00		2,45
Install 4" french drain(STR, 25 pins) for transle	122	су	\$ 45.00		5,49
Specimen oak tree for roundabout center Structural soil at \$35/CY plus placement	1	ea	\$ 5,000.00		5,000
3' depth excavation of area to receive structural soil incl. offhaul	122	су	\$ 25.00		3,050
Tree planting preparation costs (For new trees)					
Troc planting property (7)			Subtotal	\$	59,16
Custom walls incorporating news stands	5	ea	\$ 2,000.00		10,00
Umbrellas for café seating sets	9	ea	\$ 200.00		1,80
Black metal café table and chair set	9	ea	\$ 800.00	\$	7,20
Metai tree grates 5' square, painted custom color	4	ea	\$ 1,000.00		4,00
Cast stone recycle bins	4	ea	\$ 2,000.00		8,00
Cast stone trash receptacles	4	ea	\$ 1,000.00		4,00
3' tall ornamental steel fence	67	If	\$ 80.00		5,36
Clay pot (includes drainlines)	9		\$ 800.00		7,20
Drinking fountain, custom with stonework	1	ea	\$ 4,000.00		4,00
Artistic bike racks	7	ea	\$ 800.00		5,60
Wood benches	1	ea	\$ 2,000.00	\$	2,00
Site Furnishings		1		+*	13,00
	<u></u>		Subtotal	\$	15,00 15,00
system for shrubs/groundcovers/pots, water meters.	1	allow	\$ 15,000.0	\$	15.00
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),		╁──-	 	+-	
Irrigation Costs		┼			
		-	Subtotal	\$	192,99
Excluding AC overlay	200	sf	\$ 8.0	· · · ·	1,60
New 4" concrete sidewalk w/ lamp black and hand seeded aggregate	8,673		\$ 8.0	<u> </u>	69,38
New peach/pink colored sidewalks with blue-green tile inlays	28		\$ 1,500.0		42,00
2' tall concrete pilasters with tile inserts and cast stone caps	221		\$ 125.0		27,62
14" tall concrete seating modules with tile inserts but no cap	5		\$ 1,200.0		6,00
16" tall concrete seating modules with tile inserts but no cap	444		\$ 12.0		5,32
Concrete Apron Concrete Island	42		\$ 200.0	0 \$	8,40
Concrete A	550) If	\$ 18.0	0 \$	9,90
Curb & Gutter (Roundabout & Median Islands)				0 \$	12,24

Curb & Gutter	300	lf	T \$	18.00	\$	5,400
New vehicular 6" concrete sidewalk w/color and tile inlays	335	sf	Ŝ	12.00	\$	4,020
New 4" concrete sidewalk w/ lamp black and hand seeded aggregate	1,591	sf	\$	8.00	\$	12,728
			Su	btotal	\$	29,648
Irrigation Costs		-	-			
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),						
system for shrubs/groundcovers/pots, water meters.	1	allow	\$	5,000.00	\$	5,000
			Su	btotal	\$	5,000
Site Furnishings				· · · · · · · · · · · · · · · · · · ·		-13-5-5
Clay pots (includes drainlines)	2	ea	\$	800.00	\$	1,600
			Su	btotal	\$	1,600
Tree planting preparation costs (For new trees)						
3' depth excavation of area to receive structural soil incl. offhaul	89	су	\$	25.00	\$	2,225
Structural soil at \$35/CY plus placement	89	су	\$	45.00	\$	4,005
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	160	lf	\$	35.00	\$	5,600
			Su	btotal	\$	11,830
Landscape and sidewalk maintenance-6 months						
Sidewalk and crosswalk steam cleaning every 6 months	1,926	sf	\$	0	\$	482
Tree maintenance	4	ea	\$	24	\$	96
Landscaping	270	sf	\$	0	\$	32
Annual color	8	sf	\$	3	\$	24
			Sul	btotal	\$	634
TOTAL FOR HENRY STREET AREA					,	6101,934.90

SOUTHEAST STREETSCAPE AREA					Π	
Pedestrian barriers and control	1	allow	\$	1,000.00	\$	1,000
Demolition		<u> </u>	▙	···	<u> </u>	
Demo (E) Curb & Gutter	94	lf	-	4.00	-	
Demo (E) Concrete sidewalk	1,622	sf	\$	1.00	\$	94
Sycamore removal (Includes stump removal typ.)	1,022	ea	\$	1,500.00	\$	1,622
Irrigation system demolition (Remove valves and cap ex. lines only)	- 	allow	\$	500.00	\$	1,500
Salar System demonstry (remove valves and cap ex. lines only)	<u> </u>	allow	<u> </u>	ıbtotal	\$	500
Lighting Costs		 	31	ibtotai	13	3,716
14' height acom pole lights (plain)	4		\$	0.500.00	_	40.000
Twinkle lights in trees	5	ea	\$	2,500.00	\$	10,000
TWING BYING IT 11003		ea		800.00	\$	4,000
Landscaping costs) આ	ibtotal	\$	14,000
Fine grading			-	4.60	_	
12" depth topsoil import and spreading for groundcover & shrubs	200	sf	\$	1.00	\$	200
Planter mix and installation in pots	8	C)/	\$	100.00	ŝ	900
Weed control fabric, installed (Includes underneath tree grates)	1	су	\$	100.00	\$	100
1 gallon groundcover	200	sf	\$	0.50	\$	100
1 gailori groundcover	50	ea	\$	9.00	\$	450
Concrete work			Su	btotal	\$	1,650
2" AC Overlay						
Curb & Gutter	2,400	sf	\$	1.00	\$	2,400
	183	If	\$	18.00	\$	3,294
New peach/pink colored sidewalks with blue-green tile inlays	544	sf	\$	8.00	\$	4,352
New vehicular 6" concrete sidewalk w/color and tile inlays	216	sf	\$	12.00	\$	2,592
Excluding AC overlay			Su	btotal	\$	10,238
Irrigation Costs						
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),					•	
system for shrubs/groundcovers/pots, water meters.						
System for shrubs/groundcovers/pots, water meters.	1	allow	\$	5,000.00	\$	5,000
Tree planting preparation costs (Under sidewalk near redwood trees)			Su	btotal	\$	5,000
3' depth excavation of area to receive structural soil incl. offhaul			_			
Structural soil at \$35/CY plus placement	89	су	\$	25.00	\$	2,225
Outdottal a soli at \$55/01 plus placement	89	су	\$	45.00	\$	4,005
Landscape and sidewalk maintenance-6 months	 		Su	btotal	\$	6,230
Sidewalk and crosswalk steam cleaning every 6 months	544	sf	\$	0	\$	82
Tree maintenance	10	ea	\$	24	\$	
Landscaping	200	ea sf	\$		\$	240
	200	51		0 btotal		
TOTAL FOR SOUTHEAST STREETSCAPE AREA			ou	nroral	\$	346
THE TOTAL OF THE POWER AND THE						\$42,179.60

SOUTHWEST STREETSCAPE AREA	" 1 ··· · · ·		1		·
Pedestrian barriers and control		allow	\$ 1,000.00	+	4.000
		allow	\$ 1,000.00) \$	1,000
Demolition		+-	 	+	
Adjust (E) Utility Rim to grade	 	ea	\$ 1,000.00	\$	1.000
Demo (E) Curb & Gutter	94		\$ 1.00		1,000 94
Demo (E) Concrete sidewalk	1,622		\$ 1.00		1,622
Pear tree removal	2		\$ 400.00		800
Pear "boxes" to be removed NIC	2		\$ 400.00		800
Irrigation system demolition (Remove valves and cap ex. lines only)	1				500
		T	Subtotal	\$	4,816
Lighting Costs		1	1	† <u>Ť</u>	.,
14' height acom pole lights (plain)	3	ea	\$ 2,500.00	\$	7,500
Twinkle lights in trees	2	ea	\$ 800.00		1,600
		T	Subtotal	\$	9,100
Landscaping costs				Ť	
Fine grading	250	sf	\$ 1.00	\$	250
12" depth topsoil import and spreading for groundcover & shrubs	9	су	\$ 100.00	\$	900
Planter mix and installation in pots	3		\$ 100.00		300
3" gravel mulch under tree grates only	50	sf	\$ 0.60		30
3" depth bark mulch, including installation	250		\$ 0.60		150
Weed control fabric, installed (Includes underneath tree grates)	250	sf	\$ 0.50		125
24" box trees (includes staking)	2	ea	\$ 350.00		700
1 gallon groundcover	62	ea	\$ 9.00		558
Annuals 4" pot	24	plant	\$ 3.00		72
		1	Subtotal	\$	3,085
Concrete work			1	1	0,000
2" AC Overlay	2,307	sf	\$ 1.00	\$	2,307
Curb & Gutter	195	If	\$ 18.00		3,510
New peach/pink colored sidewalks with blue-green tile inlays	2,092	sf	\$ 8.00	\$	16,736
New vehicular 6" concrete sidewalk w/color and tile inlays	800	sf	\$ 12.00	\$	9,600
Special paving to encourage window shopping	54	sf	\$ 20.00	\$	1,080
Excluding AC overlay			Subtotal	\$	30,926
	Ţ · · · · ·			1	
Irrigation Costs	T			1	
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),		<u> </u>			
system for shrubs/groundcovers/pots, water meters.	1	allow	\$ 5,000.00	\$	5,000
			Subtotal	\$	5,000
Site Furnishings					,
Wood benches	2	ea	\$ 2,000.00	\$	4,000
Artistic bike racks	1	ea	\$ 800.00	\$	800
Clay pot (includes drainlines)	6	ea	\$ 800.00		4,800
Cast stone trash receptacles	1	ea	\$ 1,000.00	\$	1,000
Cast stone recycle bins	1	ea	\$ 2,000.00		2,000
Metal tree grates 5' square, painted custom color	11	ea	\$ 1,000.00		11,000
			Subtotal	\$	23,600
Tree planting preparation costs (For new trees)					
3' depth excavation of area to receive structural soil incl. offhaul	114	су	\$ 25.00	\$	2,850
Structural soil at \$35/CY plus placement	114	су	\$ 45.00	\$	5,130
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	210	lf	\$ 35.00	\$	7,350
			Subtotal	\$	15,330
Landscape and sidewalk maintenance-6 months				Ť	
Sidewalk and crosswalk steam cleaning every 2 months	2,092	sf	\$ 0	\$	314
Landscaping	250	sf	\$ 0	\$	30
Tree maintenance	2	ea	\$ 24	\$	48
Annual color	24	sf	\$ 3	\$	72
			Subtotal	\$	464
TOTAL FOR SOUTHWEST STREETSCAPE AREA				<u> </u>	\$93,320.80
			·		7.5,020.00
BRIDGE AREA	T	T	7		
Pedestrian barriers and control	1	allow	\$ 1,000.00	\$	1,000
	 		<u> </u>	<u> </u>	1,000
Demolition					
Demo (E) curb & gutter					
	100	If	\$ 1.00	\$	100
Demo (E) Concrete sidewalk	100 1,600	sf	\$ 1.00 \$ 1.00	\$	100 1,600
Demo (E) Concrete sidewalk Irrigation system demolition (Remove valves and cap ex. lines only)		sf		\$	100 1,600 500

					\$	2,200
Tree planting preparation costs (For new trees)			┼─		_	
3' depth excavation of area to receive structural soil incl. offhaul	33	CV	18	25.00	\$	825
Structural soil at \$35/CY plus placement	33	CV	<u> *</u>	45.00		1,485
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	50	If	\$	35.00	\$	1,750
				·	\$	4,060
Bridge modification costs						
Remove/ paint/ replace existing metal railing and posts	1	ls	s	10.000	\$	10,000
Custom concrete lighted sentinels at bridge	4	ea	Ŝ	6,500	\$	26,000
Patch/add existing 4" concrete sidewalk w/ peach colored pavement	1.072	sf	\$	8.00	\$	8,576
Move fire hydrant	1	ea	† *	3000	\$	3,000
					\$	47,576
TOTAL FOR BRIDGE AREA						\$54,836.00

Project Cost Estimate - Alternate 2B-Jazz Musician Roundabout Intersection

Project Name: Walkable Cotati Phase 1 Project Owner: City of Cotati Project Location: Cotati, CA	Project No.: Estimated by: Checked by: Date:	Fisi Ber	-7 her/Wise tolero 8, 2001
Summary			
Mobilization		\$	50,000
Tree and root pruning and structural soil		\$	110,875
North Entry Traffic Calming		\$	208,915
Northeast Streetscape		\$	271,107
Northwest Streetscape		\$	289,292
Charles Street (Including AC overlay)		\$	66,881
Henry Street (Including AC overlay)		•	\$101,934.90
Roundabout Intersection		\$	431,095
Southeast Streetscape		\$	42,180
Southwest Streetscape		\$	93,321
Bridge Area		\$	54,836
AC Overlay (From E. Cotati to bridge, excluding Henry and Charles Streets)		\$	79,000
Subtotal		\$	1,799,436
Contingencies (25%)		\$	449,859
Public involvement, studies, engineering (15%)		\$	269,915
Construction-related support services (12%)		\$	215,932
Total		\$	2,735,143
Base Project Summary			
Note: Items include contingencies			
Mobilization		œ	05.000
Jazz Musician roundabout		\$ •	25,000
Tree and root pruning and structural soil		\$ \$	258,239 138,594
Repair additional uprooted sidewalk		Ф \$	37,500
AC Overlay		\$ \$	50,448
Total (excluding studies/engineering)		\$	509,780

item	Quantity	Units	s Engineering Estimate					
	wantity	Units	Unit Cost	ing	Total			
TREE AND ROOT PRUNING & SOIL PREP. (For 14 sycamores and 1 redwood	<u> </u>	 	Onic Cost	┼	TOTAL			
3' depth excavation of area to receive structural soil incl. offhaul	350	су	\$ 25.00	\$	9.750			
Pneumatic excavation of root zone of existing trees	15	ea	\$ 25.00	\$	8,750 15,000			
Root pruning	15	ea	\$ 1,000.00					
Crown reduction	15	ea	\$ 500.00	\$	2,250			
Structural soil at \$35/CY plus placement	350		\$ 45.00	\$	7,500			
Install 4* french drain(STR 35 pipe) for trench, connect to storm drain	400	cy If	\$ 45.00	\$	15,750			
Patch/add existing 4" concrete sidewalk w/ lamp black and hand seeded aggregate	2,550	sf	\$ 35.00	\$	14,000			
Twinkle lights in trees	15	ea	\$ 800.00		20,400			
3" gravel mulch under tree grates only	375	sf	\$ 0.60	\$	12,000			
Metal tree grates 5' square, painted custom color	15				225			
motal tree grates o square, painted custom color	15	ea	\$ 1,000.00 Subtotal	\$	15,000			
			Subtotal		110,875.00			
NORTH ENTRY TRAFFIC CALMING				 				
Pedestrian barriers and control	1	allow	\$ 1,500.00		4 500			
awillow and condo		anow	φ 1,500.00	\$	1,500			
Demolition				-				
Adjust (E) Utility Rim to grade	3	ea	\$ 1,000.00	\$	3,000			
Demo (E) Curb & Gutter	341	If	\$ 1,000.00	\$	3,000			
Demo (E) Concrete Paving	350	sf	\$ 3.00	\$	1,050			
Demo (E) Concrete sidewalk	4,248	sf	\$ 1.00	\$	4,248			
Sycamore removal (Includes stump removal typ.)	4	ea	\$ 1,500.00	\$	6,000			
	•	- 50	Subtotal	\$	14,639			
Lighting Costs			- Custotui	 •	14,000			
14' height acom pole lights (plain)	18	ea	\$ 2,500.00	\$	45,000			
Sentinel light in median	1	ea	\$ 7,500.00	\$	7,500			
	<u>-</u>	- CG	Subtotal	\$	52,500			
Landscaping costs			Oubtotai	٣	32,300			
Fine grading	1,279	sf	\$ 1.00	\$	1,279			
12" depth topsoil import and spreading for groundcover & shrubs	47	cy	\$ 100.00	\$	4,700			
Planter mix and installation in pots	8		\$ 100.00	\$				
3" gravel mulch under tree grates only	50	cy sf	\$ 0.60	\$	800 30			
3" depth bark mulch, including installation	1,179	sf	\$ 0.60	\$				
Weed control fabric, installed (Includes underneath tree grates)	1,179	sf	\$ 0.50	\$	707			
24" box trees (includes staking)	1,179		\$ 350.00	\$	590			
New lawn in plaza	115	ea sf		\$	2,100			
1 gallon groundcover	294				115			
Annuals 4" pot	637	ea	\$ 9.00	\$	2,646			
7 William O T pot	03/	plant	\$ 3.00	\$	1,911			
Concrete work		}	Subtotal	\$	14,878			
Curb & Gutter	CEO.	- 12	£ 40.00		44 700			
Curb & Gutter (Center Island)	650	lf	\$ 18.00	\$	11,700			
a	144	lf	\$ 15.00	\$	2,160			
2" Ac Overlay 14" tall seat walls with tile inserts	12,812	sf	\$ 1.00		12,812			
2) tall concrete pilestore with tile insente and and all the second and the secon	34	lf	\$ 125.00		4,250			
2' tall concrete pilasters with tile inserts and cast stone caps (Roundabout NIC)	4	ea	\$ 1,500.00	\$	6,000			
New peach/pink colored sidewalks with blue-green tile inlays	3,110	sf	\$ 8.00	\$	24,880			
New 4" concrete sidewalk w/ lamp black and hand seeded aggregate	2,031	sf	\$ 8.00	\$	16,248			
Special paving to encourage window shopping	114	sf	\$ 20.00	\$	2,280			
Excluding AC overlay			Subtotal	\$	67,518			
		T						

ition 1	allow	\$:	5,000.00		
	allow	\$:	5 000 00		
				\$	5,000
		Subt		\$	5,000
		-			3,000
1	ea	\$ 2	2 000 00	\$	2,000
· ·					2,400
					6,400
		<u> </u>			2,000
				<u> </u>	4,000
		_			2,000
				·	3,000
			<u> </u>		21,800
*****		Gub	.ota.	<u> </u>	21,000
339	CV	\$	25.00	\$	8,475
					15,255
	lf If				7,350
		Subt			31,080
				<u> </u>	01,000
5.141	sf	S.	0	\$	1,285
					180
					975
	_ -				2,441
				\$	208,915
1			- I	<u>*</u>	200,975
	1 3 8 2 2 2 2 3 3 339 339 210 5,141 1,504 325	3 ea 8 ea 2 ea 2 ea 2 ea 3 ea 339 cy 339 cy 210 lf 5,141 sf 1,504 sf	3 ea \$ 8 ea \$ 2 ea \$ 2 ea \$ 2 ea \$ 3 ea \$ Subbox 339 cy \$ 339 cy \$ 210 if \$ Subbox 5,141 sf \$ 1,504 sf \$ 325 sf \$	3 ea \$ 800.00 8 ea \$ 800.00 2 ea \$ 1,000.00 2 ea \$ 2,000.00 2 ea \$ 1,000.00 3 ea \$ 1,000.00 Subtotal 339 cy \$ 25.00 339 cy \$ 45.00 210 If \$ 35.00 Subtotal	3 ea \$ 800.00 \$ 8 ea \$ 800.00 \$ 2 ea \$ 1,000.00 \$ 2 ea \$ 2,000.00 \$ 2 ea \$ 1,000.00 \$ 3 ea \$ 1,000.00 \$ Subtotal \$ 339 cy \$ 25.00 \$ 339 cy \$ 45.00 \$ 210 If \$ 35.00 \$ Subtotal \$ 5,141 sf \$ 0 \$ 1,504 sf \$ 0 \$ 325 sf \$ 3 \$

Padastrian harriors and control		T		T-	
Pedestrian barriers and control	1	allow	\$ 1,000.00	\$	1,00
Demolition					
Demo (E) Curb & Gutter					
Demo (E) Concrete sidewalk	291	<u>If</u>	\$ 1.00		29
Pear tree removal	4,520	sf	\$ 1.00		4,52
Pear "boxes" to be removed NIC	1		\$ 400.00		40
Groundcover/shrub removal	1 1		\$ 400.00		4(
Irrigation system demolition (Remove valves and cap ex. lines only)	240	sf	\$ 0.30		7
gallon bystem demonator (retrieve valves and cap ex. lines only)	1	allow	\$ 500.00	_ · ·	50
Lighting Costs		 	Subtotal	\$	6,18
14' height acom pole lights (plain)	<u> </u>	 		ــــا	
Twinkle lights in trees	9	ea	\$ 2,500.00		22, 50
	7	ea	\$ 800.00	+	5,60
Landscaping costs		ļ	Subtotal	\$	28,10
Fine grading	252	-		 	
12" depth topsoil import and spreading for groundcover & shrubs	252	sf	\$ 1.00	\$	25
Planter mix and installation in pots	9	су	\$ 100.00		90
3" gravel mulch under tree grates only	7	cy	\$ 100.00		70
3" depth bark mulch, including installation	25	sf	\$ 0.60	<u> </u>	1
Weed control fabric, installed (Includes underneath tree grates)	252	sf	\$ 0.60		15
24" box trees (includes staking)	277	sf	\$ 0.50		13
1 gallon groundcover	7	ea	\$ 350.00		2,45
Annuals 4" pot	50	ea	\$ 9.00	\$	45
Timado / por	52	plants	\$ 3.00	\$	15
Concrete work		<u> </u>	Subtotal	\$	5,21
2" AC Overlay	6.075			<u> </u>	
Curb & Gutter	6,275	sf	\$ 1.00	\$	6,27
14" tall seat walls with tile inserts	406	lf Ic	\$ 18.00		7,30
2' tall concrete pilasters with tile inserts and cast stone caps (Roundabout NIC)	22	lf .	\$ 125.00	\$	2,75
Small street fountain, 6' diameter, 16 ' tall w/ cast stone cap & tile inserts	3	ea	\$ 1,500.00		4,50
New peach/pink colored sidewalks with blue-green tile inlays	1 2 2 2 2 2	ea	\$ 20,000.00		20, 000
New vehicular 6" concrete sidewalk w/color and tile inlays	6,330	sf	\$ 8.00		50, 640
Special sidewalk for window shopping	100	sf	\$ 12.00	\$	1,200
Excluding AC overlay	390	sf	\$ 8.00	\$	3, 120
- south g / to orondy			Subtotal	\$	89, 518
rrigation Costs			· · · · · · · · · · · · · · · · · · ·	<u> </u>	
Orip irrigation system for trees, (IPS hose in sleeve between tree wells),				<u> </u>	 -
system for shrubs/groundcovers/pots, water meters.	1		£ 40.000.00	_	
	<u>-</u>	allow	\$ 10,000.00	\$	10, 000
Site Furnishings			Subtotal	\$	10 ,000
Artistic bike racks	1		¢ 900 00	•	
Metal pedestrian passageway enhancements-large, aluminum	2	ea	\$ 800.00 \$ 7,000.00	\$	800
		ea			14,000
Metal pedestrian passageway enhancement-ismail, aluminum					3,500
Metal pedestrian passageway enhancement-Ismall, aluminum	1	ea	\$ 3,500.00		
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines)	13	ea	\$ 800.00	\$	10, 400
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles	13 1	ea ea	\$ 800.00 \$ 1,000.00	\$ \$	10,4 00 1,0 00
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles I' tall omamental steel fence	13 1 152	ea ea If	\$ 800.00 \$ 1,000.00 \$ 80.00	\$ \$ \$	10,4 00 1,0 00 12, 160
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles I' tall ornamental steel fence Cast stone recycle bins	13 1 152 1	ea ea If ea	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00	\$ \$ \$	10,400 1,000 12,160 2,000
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles I' tall ornamental steel fence Cast stone recycle bins Cast stone ash ums	13 1 152 1	ea ea If ea ea	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00	\$ \$ \$	10,400 1,000 12,160 2,000 1,000
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles I' tall omamental steel fence Cast stone recycle bins Cast stone ash ums Metal tree grates 5' square, painted custom color	13 1 152 1 1	ea ea If ea ea ea	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00	\$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 1,000
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles I' tall ornamental steel fence Cast stone recycle bins Cast stone ash urns Metal tree grates 5' square, painted custom color Black metal café table and chair set	13 1 152 1 1 1 1 63	ea ea If ea ea ea ea	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 800.00	\$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 1,000 50,400
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles I' tall ornamental steel fence Cast stone recycle bins Cast stone ash urns Metal tree grates 5' square, painted custom color Black metal café table and chair set Imbrellas for café seating sets	13 1 152 1 1 1 1 63 23	ea ea If ea ea ea ea ea	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 800.00 \$ 200.00	\$ \$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 1,000 50,400 4,600
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles I' tall omamental steel fence Cast stone recycle bins Cast stone ash ums Metal tree grates 5' square, painted custom color Black metal café table and chair set Umbrellas for café seating sets	13 1 152 1 1 1 1 63	ea ea If ea ea ea ea	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 800.00 \$ 200.00 \$ 2,000.00	\$ \$ \$ \$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 1,000 50,400 4,600 2,000
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles If tall omamental steel fence Cast stone recycle bins Cast stone ash urns Metal tree grates 5' square, painted custom color Black metal café table and chair set Umbrellas for café seating sets Custom walls incorporating news stands	13 1 152 1 1 1 1 63 23	ea ea If ea ea ea ea ea	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 800.00 \$ 200.00	\$ \$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 1,000 50,400 4,600 2,000
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles I' tall omamental steel fence Cast stone recycle bins Cast stone ash urns Metal tree grates 5' square, painted custom color Black metal café table and chair set Umbrellas for café seating sets Custom walls incorporating news stands Tree planting preparation costs (For new trees)	13 1 152 1 1 1 1 63 23	ea ea If ea ea ea ea ea ea	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 800.00 \$ 200.00 \$ 2,000.00 Subtotal	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 1,000 50,400 4,600 2,000
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles I' tall omamental steel fence Cast stone recycle bins Cast stone ash urns Metal tree grates 5' square, painted custom color Black metal café table and chair set Umbrellas for café seating sets Custom walls incorporating news stands I'ree planting preparation costs (For new trees) I' depth excavation of area to receive structural soil incl. offhaul	13 1 152 1 1 1 1 63 23 1	ea ea If ea ea ea ea ea ea ea cy	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 800.00 \$ 200.00 \$ 2,000.00 Subtotal	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 1,000 50,400 4,600 2,000 162,860
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles I' tall omamental steel fence Cast stone recycle bins Cast stone ash urns Metal tree grates 5' square, painted custom color Clack metal café table and chair set Umbrellas for café seating sets Custom walls incorporating news stands I'ree planting preparation costs (For new trees) I' depth excavation of area to receive structural soil incl. offhaul Citructural soil at \$35/CY plus placement	13 1 152 1 1 1 63 23 1	ea ea If ea ea ea ea ea cy cy	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 800.00 \$ 200.00 \$ 2,000.00 Subtotal \$ 25.00 \$ 45.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 1,000 50,400 4,600 2,000 162,860 11,880
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles I' tall omamental steel fence Cast stone recycle bins Cast stone ash urns Metal tree grates 5' square, painted custom color Clack metal café table and chair set Umbrellas for café seating sets Custom walls incorporating news stands I'ree planting preparation costs (For new trees) I' depth excavation of area to receive structural soil incl. offhaul Citructural soil at \$35/CY plus placement	13 1 152 1 1 1 1 63 23 1	ea ea If ea ea ea ea ea ea ea cy	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 800.00 \$ 200.00 \$ 2,000.00 Subtotal \$ 25.00 \$ 45.00 \$ 35.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 1,000 4,600 2,000 182,860 11,880 7,700
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles I' tall ornamental steel fence Cast stone recycle bins Cast stone ash urns Metal tree grates 5' square, painted custom color Clack metal café table and chair set Clast metal café seating sets Custom walls incorporating news stands I' depth excavation of area to receive structural soil incl. offhaul Citructural soil at \$35/CY plus placement Install 4" french drain(STR 35 pipe) for trench, connect to storm drain:	13 1 152 1 1 1 63 23 1	ea ea If ea ea ea ea ea cy cy	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 800.00 \$ 200.00 \$ 2,000.00 Subtotal \$ 25.00 \$ 45.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 50,400 4,600 2,000 102,860 11,880 7,700
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles I' tall omamental steel fence Cast stone recycle bins Cast stone ash urns Metal tree grates 5' square, painted custom color Clack metal café table and chair set Umbrellas for café seating sets Custom walls incorporating news stands I'ree planting preparation costs (For new trees) I' depth excavation of area to receive structural soil incl. offhaul Circutural soil at \$35/CY plus placement Install 4" french drain(STR 35 pipe) for trench, connect to storm drain: andscape and sidewalk maintenance-6 months	13 1 152 1 1 1 1 63 23 1 1 264 264 220	ea ea lf ea ea ea ea ea ea cy cy lf	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 200.00 \$ 2,000.00 \$ 2,000.00 \$ 2,000.00 \$ 2,500.00 \$ 35.00 \$ 35.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 50,400 4,600 2,000 162,860 11,880 7,700 26,180
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles If tall ornamental steel fence Cast stone recycle bins Cast stone ash urns Metal tree grates 5' square, painted custom color Black metal café table and chair set Umbrellas for café seating sets Custom walls incorporating news stands Irree planting preparation costs (For new trees) If depth excavation of area to receive structural soil incl. offhaul Itructural soil at \$35/CY plus placement Install 4" french drain(STR 35 pipe) for trench, connect to storm drain: andscape and sidewalk maintenance-6 months Idewalk and crosswalk steam cleaning every 6 months	13 1 152 1 1 1 63 23 1 1 264 264 220	ea ea lf ea ea ea ea ea cy cy lf	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 800.00 \$ 200.00 \$ 2,000.00 Subtotal \$ 25.00 \$ 45.00 \$ 35.00 Subtotal	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 50,400 4,600 2,000 162,860 11,880 7,700 26,180
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles If tall omamental steel fence Cast stone recycle bins Cast stone ash urns Metal tree grates 5' square, painted custom color Black metal café table and chair set Umbrellas for café seating sets Custom walls incorporating news stands Tree planting preparation costs (For new trees) Telepth excavation of area to receive structural soil incl. offhaul Structural soil at \$35/CY plus placement Install 4" french drain(STR 35 pipe) for trench, connect to storm drain: andscape and sidewalk maintenance-6 months idewalk and crosswalk steam cleaning every 6 months ree maintenance	13 1 152 1 1 1 1 63 23 1 1 264 264 220	ea ea lf ea ea ea ea ea ea ea ea ea sy cy cy lf	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 800.00 \$ 200.00 \$ 2,000.00 Subtotal \$ 25.00 \$ 45.00 \$ 35.00 Subtotal	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 1,000 50,400 4,600 2,000 182,860 11,880 7,700 26,180
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles If tall omamental steel fence Cast stone recycle bins Cast stone ash urns Metal tree grates 5' square, painted custom color Black metal café table and chair set Umbrellas for café seating sets Custom walls incorporating news stands Tree planting preparation costs (For new trees) I' depth excavation of area to receive structural soil incl. offhaul Structural soil at \$35/CY plus placement Install 4" french drain(STR 35 pipe) for trench, connect to storm drain: andscape and sidewalk maintenance-6 months idewalk and crosswalk steam cleaning every 6 months free maintenance andscaping	13 1 152 1 1 1 1 63 23 1 1 264 264 220 6,820 7 200	ea ea lf ea ea ea ea ea ea ea ea sf	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 200.00 \$ 2,000.00 \$ 2,000.00 \$ 2,500.00 \$ 45.00 \$ 45.00 \$ 35.00 \$ 35.00 \$ 24 \$ 0	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 1,000 50,400 2,000 182,860 11,880 7,700 26,180
Metal pedestrian passageway enhancement-Ismall, aluminum Clay pot (includes drainlines) Cast stone trash receptacles If tall ornamental steel fence Cast stone recycle bins Cast stone ash urns Metal tree grates 5' square, painted custom color Black metal café table and chair set Umbrellas for café seating sets Custom walls incorporating news stands Iree planting preparation costs (For new trees) I' depth excavation of area to receive structural soil incl. offhaul Etructural soil at \$35/CY plus placement Install 4" french drain(STR 35 pipe) for trench, connect to storm drain: andscape and sidewalk maintenance-6 months idewalk and crosswalk steam cleaning every 6 months ree maintenance	13 1 152 1 1 1 1 63 23 1 1 264 264 220	ea ea lf ea ea ea ea ea ea ea ea ea sf sf	\$ 800.00 \$ 1,000.00 \$ 80.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 200.00 \$ 2,000.00 Subtotal \$ 25.00 \$ 45.00 \$ 35.00 Subtotal \$ 0 \$ 24 \$ 0	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,400 1,000 12,160 2,000 1,000 1,000 50,400 4,600 2,000 182,860 11,880 7,700 26,180

NORTHWEST STREETSCAPE AREA	Т	T -		т-	
Pedestrian barriers and control	1	allow	\$ 1,000.00	S	1,000
B				†Ť	.,00
Demolition				1	
Demo (E) Curb & Gutter Demo (E) Concrete sidewalk	272	lf	\$ 1.00		27
Groundcover/shrub removal	5,260	sf	\$ 1.00	\$	5,26
	50	sf	\$ 0.30	\$	1:
Irrigation system demolition (Remove valves and cap ex. lines only)	1	allow	\$ 500.00	\$	500
Lighting Costs		<u> </u>	Subtotal	\$	6,047
14' height acom pole lights (plain)		ļ			
14 height acom pole lights (plain)	9	ea	\$ 2,500.00	_	22,500
Landscaping costs		<u> </u>	Subtotal	\$	22,500
Fine grading		L		$oldsymbol{ol}}}}}}}}}}}}}}}}}$	
	263	sf	\$ 1.00		263
12" depth topsoil import and spreading for groundcover & shrubs Planter mix and installation in pots	263	су	\$ 100.00	<u> </u>	26,300
3" depth bark mulch, including installation	7	су	\$ 100.00		700
Weed control fabric, installed (Includes underneath tree grates)	263	sf	\$ 0.60		158
24" box trees (includes staking)	263	sf	\$ 0.50		132
1 gallon groundcover	7	ea	\$ 350.00	<u> </u>	2,450
Annuals 4" pot	66	ea	\$ 9.00		594
Allituals 4 pot	56	plant	\$ 3.00		168
Concrete work		<u> </u>	Subtotal	\$	30,764
2" AC Overlay		L			
Curb & Gutter	6,051	sf	\$ 1.00	\$	6,051
	409	lf	\$ 18.00		7,362
Passageway enhancement:4' tall concrete pilasters w/ tile inlay& tubular steel	1	ea	\$ 30,000.00	_	30,000
New peach/pink colored sidewalks with blue-green tile inlays New vehicular 6" concrete sidewalk w/color and tile inlays	7,448	sf	\$ 8.00	\$	59,584
Excluding AC overlay	100	sf	\$ 12.00	\$	1,200
Excluding AC overlay			Subtotal	\$	98,146
Irrigation Costs	<u> </u>			ļ	
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),	<u> </u>			<u> </u>	
system for shrubs/groundcovers/pots, water meters.	<u></u>			<u> </u>	· · · · · · · · · · · · · · · · · · ·
system for shirdbs/groundcovers/pots, water meters.	. 1	allow	\$ 10,000.00	\$	10,000
Site Furnishings	<u> </u>		Subtotal	\$	10,000
Wood benches				<u> </u>	
Artistic bike racks	3	ea	\$ 2,000.00	\$	6,000
3' tall ornamental steel fence	2	ea	\$ 800.00	\$	1,600
Clay pot (includes drainlines)	128	lf	\$ 80.00	\$	10,240
Cast stone trash receptacles	14	ea	\$ 800.00	\$	11,200
Cast stone trash receptacies Cast stone recycle bins	1	ea.	\$ 1,000.00	\$	1,000
Black metal café table and chair set	1	ea	\$ 2,000.00	\$	2,000
Mailboxes, FedEx boxes, etc	18	ea	\$ 800.00	\$	14,400
	4	ea	NIC	ļ	
Umbrellas for café seating sets	18	ea	\$ 200.00		3,600
Flower kiosk	1	ea	\$ 30,000.00		30,000
Custom walls incorporating news stands	8	ea	\$ 2,000.00	\$	16,000
Tree all address of the state o			Subtotal	\$	96,040
Tree planting preparation costs (For new trees)					
3' depth excavation of area to receive structural soil incl. offhaul	217	су	\$ 25.00	\$	5,425
Structural soil at \$35/CY plus placement	217	су	\$ 45.00		9,765
nstall 4" french drain(STR 35 pipe) for trench, connect to storm drain	210	if	\$ 35.00	\$	7,350
			Subtotal	\$	22,540
andscape and sidewalk maintenance-6 months					
Sidewalk and crosswalk steam cleaning every 6 months	7,548	sf	\$ 0	\$	1,887
Free maintenance	7	ea	\$ 24	\$	168
andscaping	263	sf	\$ 0	\$	32
Annual color	56	sf	\$ 3		168
		1	Subtotal	\$	2.255
OTAL FOR NORTHWEST STREETSCAPE AREA	1		Subtotal	\$	2,255 \$289,291.86

CHARLES STREET AREA					
Pedestrian barriers and control	1	allow	\$	1,000.00	\$ 1,000
Lighting Costs			<u> </u>		
14' height acom pole lights (plain)	5	ea	\$	2,500.00	\$ 12,500
Twinkle lights in trees	4	ea	\$	800.00	\$ 3,200

Landscaping costs	T'	Т	T	T	
Fine grading	132	sf	\$ 1.00	\$	132
12" depth topsoil import and spreading for groundcover & shrubs			\$ 100.00		500
3" gravel mulch under tree grates only	25		\$ 0.60		15
3" depth bark mulch, including installation	132		\$ 0.60		79
Weed control fabric, installed (Includes underneath tree grates)	182		\$ 0.50		91
24" box trees (includes staking)	102		\$ 350.00		
1 gallon groundcover	33		\$ 9.00	- 	1,400
		Ea	Subtotal		297
Concrete work		+	Subtotal	\$	2,514
2" AC Overlay	1 900		<u> </u>	-	
Curb & Gutter	1,800		\$ 2.00		3,600
New vehicular 6" concrete sidewalk w/color and tile inlays	228		\$ 18.00		4,104
New 4" concrete sidewalk w/ lamp black and hand seeded aggregate	120		\$ 12.00	<u>-</u>	1,440
Test is established sidewalk williamp black and hand seeded aggregate	1,485	sf	\$ 8.00		11,880
Demolition		 	Subtotal	\$	21,024
Demo (E) Curb & Gutter		ļ			
	96	If	\$ 1.00		96
Demo (E) Concrete sidewalk	512	sf	\$ 1.00	\$	512
			Subtotal	\$	608
				\top	
Irrigation Costs					
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),		T			
system for shrubs/groundcovers/pots, water meters.	1	allow	\$ 5,000.00	\$	5,000
		T	Subtotal	\$	5,000
Site Furnishings		-	Gubtotai	╁┷	
Metal tree grates 5' square, painted custom color	1	ea	\$ 1,000.00	\$	4.000
		Ca	Subtotal		1,000
Tree planting preparation costs		i	Subtotal	\$	1,000
3' depth excavation of area to receive structural soil incl. offhaul	178		6 05.00	 	
Structural soil at \$35/CY plus placement		су	\$ 25.00	-	4,450
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	178	су	\$ 45.00	\$	8,010
motes 4 mener drain(6717 35 pipe) for trench, connect to storm drain	220	lf	\$ 35.00	\$	7,700
Landscape and sidewalk maintenance-6 months			Subtotal	\$	20,160
Cidoually and assessmell at a second land and a					
Sidewalk and crosswalk steam cleaning every 6 months	1,485	sf	\$ 0		371
Tree maintenance	4	ea	\$ 24	\$	96
Landscaping	132.	sf	\$ 0	\$	16
			Subtotal	\$	483
TOTAL FOR CHARLES STREET AREA				-	\$66,881.29
JAZZ MUSICIAN ROUNDABOUT INTERSECTION AREA			I	Γ	·
Pedestrian barriers and control	1	allow	\$ 1,000.00	\$	1,000
		u.ioii	4 1,000.00	-	1,000
Demolition				├	
Adjust (E) Storm Drainage	1	ls	\$ 8,000.00	6	0.000
Demo (E) Curb & Gutter	575	lf			8,000
Demo (E) Concrete sidewalk	7,700	sf			575
Adjust (E) Utility Rim to grade	7,700	_			7,700
Demo (E) Concrete Paving	156	ea			6,000
rigation system demolition (Remove valves and cap ex. lines only)		sy	\$ 3.00	_	468
, contest taived and cap ex. lines only)		allow	\$ 500.00	\$	500
lighting Costs	. — — — — — — — — — — — — — — — — — — —		Subtotal	\$	23,243
4' height acom pole lights (plain)					
Iplighting for jazz sculpture	16	ea		\$	40,000
	4	ea	\$ 2,000.00		8,000
winkle lights in trees	5	ea	\$ 800.00	\$	4,000
			Subtotal	\$	52,000
andscaping costs					
ine grading	3,671	sf	\$ 1.00	\$	3,671
2" depth topsoil import and spreading for groundcover & shrubs	136	су	\$ 100.00		13,600
Planter mix and installation in pots	5	су	\$ 100.00		500
gravel mulch under tree grates only	100	sf	\$ 0.60		60
depth bark mulch, including installation	3,671	sf	\$ 0.60		2,203
Veed control fabric, installed (Includes underneath tree grates)	3,771	sf			
	5,771			\$	1,886
4" box trees (includes staking)	ı 51	ea		<u>\$</u>	1,750
		'		•	8,253
4" box trees (includes staking) gallon groundcover unuals 4" pot	917	ea	\$ 9.00		
gallon groundcover		ea plants	\$ 3.00	\$	441
gallon groundcover nnuals 4" pot	917				
	917		\$ 3.00	\$	441

Curb & Gutter	680	lf	T \$	18.00	T \$	12,240
Curb & Gutter (Roundabout & Median Islands)	550	If	\$	18.00		9,900
Concrete Apron	42	су	\$	200.00		8,400
Concrete Island	444	sf	\$	12.00		5,328
16" tall concrete seating modules with tile inserts but no cap	5	ea	\$	1,200.00		6,000
5' tall pedestal for sculpture	1	ea	ŝ	8,000.00		8,000
New jazz sculpture	1	ea	\$	30,000.00		30,000
3' tall pilasters withtile inlays	6	ea	Š	1,500.00		9,000
2' tall walls with tile inlays	36	If	\$	125.00		4,500
14" tall seat walls with tile inserts	221	if	\$	125.00		27,625
2' tall concrete pilasters with tile inserts and cast stone caps	28	ea	\$	1,500.00		42,000
New peach/pink colored sidewalks with blue-green tile inlays	8,673	sf	\$	8.00	-	69,384
New 4" concrete sidewalk w/ lamp black and hand seeded aggregate	200	sf	\$	8.00	_	1,600
Excluding AC overlay		<u> </u>	_	ubtotal	\$	233,977
			-	abtotal	┿	200,911
Irrigation Costs			 		+-	
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),					+-	
system for shrubs/groundcovers/pots, water meters.	1	allow	\$	15,000.00	\$	15,000
		anow		ubtotal	\$	15,000
Site Furnishings			-	biolai	1 3	15,000
Wood benches	1	ea	\$	2,000.00	\$	2,000
Artistic bike racks	7	ea	\$	800.00	\$	5,600
Drinking fountain, custom with stonework	1	ea	\$	4,000.00	\$	
Clay pot (includes drainlines)	9	ea	\$	800.00	\$	4,000 7,200
3' tall ornamental steel fence	67	If	\$	80.00	\$	5,360
Cast stone trash receptacles	4	ea	\$	1,000.00	\$	
Cast stone recycle bins	4	ea	\$	2,000.00	\$	4,000 8,000
Metal tree grates 5' square, painted custom color	4	ea	\$	1,000.00	\$	
Black metal café table and chair set	9	ea	\$	800.00	\$	4,000 7,200
Umbrellas for café seating sets	9	ea	\$	200.00	\$	1,800
Custom walls incorporating news stands	5	ea	\$	2,000.00	\$	10,000
	- 	ca		btotal	\$	
Tree planting preparation costs (For new trees)			Ju	biotai	*	59,160
3' depth excavation of area to receive structural soil incl. offhaul	122	су	\$	25.00	\$	2.050
Structural soil at \$35/CY plus placement	122	cy	\$	45.00	\$	3,050
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	70	lf	\$	35.00	\$	5,490
The state of the s	- ' 	_''		btotal		2,450
Landscape and sidewalk maintenance-6 months	 		Su	มเบเสโ	\$	10,990
Sidewalk and crosswalk steam cleaning every 6 months	8.673	sf	\$		•	0.400
Tree maintenance	13	ea		0	\$	2,168
Landscaping	3,671		\$	24	\$	312
Annual color	3,071	sf	\$	0	\$	441
······································	- i=/ 	sf	\$	3	\$	441
TOTAL FOR ROUNDABOUT INTERSECTION AREA			Su	btotal	\$	3,362
TO THE TOTAL PROPERTY OF THE TABLE TO THE TA						\$431,094.87

HENRY STREET AREA	<u> </u>	T	П		_	
Pedestrian barriers and control	1	allow	\$	1,000.00	\$	1,000
			· ·	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-	.,000
Demolition			\vdash		 	
Demo (E) Curb & Gutter	36	lf	\$	1.00	\$	36
Demo (E) Concrete sidewalk	212	sf	\$	1.00	\$	212
Small redwood to be removed	3	ea	\$	2,000.00	\$	6,000
Groundcover/shrub removal	270	sf	\$	0.30	\$	81
Imigation system demolition (Remove valves and cap ex. lines only)		allow	\$	500.00	\$	500
		anow	·	ibtotal	\$	
Lighting Costs	- 		5	ibiolai	*	6,829
14' height acom pole lights (plain)	5	-	-	0.500.00		10.500
Twinkle lights in trees		,ea	\$	2,500.00	\$	12,500
	4	ea	\$	800.00	\$	3,200
Landscaping costs			Su	ibtotal	\$	15,700
Fine grading						
	270	sf	\$	1.00	\$	270
12" depth topsoil import and spreading for groundcover & shrubs	270	су	\$	100.00	\$	27,000
Planter mix and installation in pots	1	су	\$	100.00	\$	100
3" depth bark mulch, including installation	270	sf	\$	0.60	\$	162
Weed control fabric, installed (Includes underneath tree grates)	270	sf	\$	0.50	\$	135
24" box trees (includes staking)	4	ea	\$	350.00	\$	1,400
1 gallon groundcover	67	ea	\$	9.00	\$	603
Annuals 4" pot	8	plant	Š	3.00	\$	24

			Subtotal	\$	29,694
Concrete work					
2" AC Overlay	3,750	sf	\$ 2.00	\$	7,500
Curb & Gutter	300	If	\$ 18.00	\$	5,400
New vehicular 6" concrete sidewalk w/color and tile inlays	335	sf	\$ 12.00	\$	4,020
New 4" concrete sidewalk w/ lamp black and hand seeded aggregate	1,591	sf	\$ 8.00	s	12,728
		<u> </u>	Subtotal	\$	29,648
			-	-	23,040
Irrigation Costs				-	
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),			 	 	·
system for shrubs/groundcovers/pots, water meters.	1	allow	\$ 5,000.00	\$	5,000
		unov.	Subtotal	\$	
Site Furnishings			Oubtotal	"	5,000
Clay pots (includes drainlines)	2	ea	\$ 800.00	\$	1,600
		— 	Subtotal	\$	
Tree planting preparation costs (For new trees)			Oubtotal	4	1,600
3' depth excavation of area to receive structural soil incl. offhaul	89	CV	\$ 25.00	\$	0.005
Structural soil at \$35/CY plus placement	89	CV	\$ 25.00	\$	2,225
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain	160	lf	\$ 35.00	\$	4,005
, and the state of	100	- 11	Subtotal	- T	5,600
Landscape and sidewalk maintenance-6 months			Subtotai	\$	11,830
Sidewalk and crosswalk steam cleaning every 6 months	1,926	sf	\$ 0	•	
Tree maintenance	1,920			\$	482
andscaping	270	ea sf	\$ 24 \$ 0	\$	96
Annual color	8		· · ·	\$	32
	- 8	sf	\$ 3	\$	24
TOTAL FOR HENRY STREET AREA			Subtotal	\$	634
THE TAXABLE VINCELLANCE				\$	101,934.90

SOUTHEAST STREETSCAPE AREA						
Pedestrian barriers and control	1	allow	\$	1,000.00	\$	1,000
Demolition	_		<u> </u>		<u> </u>	
Demo (E) Curb & Gutter	94	lf	+	4.00	<u> </u>	
Demo (E) Concrete sidewalk	1,622	sf	\$	1.00	\$	94
Sycamore removal (Includes stump removal typ.)	1,022	ea	\$	1.00	\$	1,622
Irrigation system demolition (Remove valves and cap ex. lines only)	1	allow	\$	1,500.00	\$	1,500
(and an out of the original o		allow		500.00	\$	500
Lighting Costs		 	131	ibtotai	\$	3,716
14' height acorn pole lights (plain)	4		-	0.500.00	_	
Twinkle lights in trees	5	ea	\$	2,500.00	\$	10,000
		ea	\$	800.00	\$	4,000
Landscaping costs		ļ — —	St	ibtotal	\$	14,000
Fine grading		<u> </u>	-			
12" depth topsoil import and spreading for groundcover & shrubs	200	sf	\$	1.00	\$	200
Planter mix and installation in pots	8	су	\$	100.00	\$	800
Weed control fabric, installed (Includes underneath tree grates)	1	су	\$	100.00	\$	100
1 gallon groundcover	200	sf	\$	0.50	\$	100
1 ganori groundcover	50	ea	\$	9.00	\$	450
Concrete work			Su	btotal	\$	1,650
2" AC Overlay						
Curb & Gutter	2,400	sf	\$	1.00	\$	2,400
New peach/pink colored sidewalks with blue-green tile inlays	183	lf	\$	18.00	\$	3,294
New vehicular 6" concrete sidewalk w/color and tile inlays	544	sf	\$	8.00	\$	4,352
Excluding AC overlay	216	sf	\$	12.00	\$	2,592
Excidency AC overlay			Su	btotal	\$	10,238
Irrigation Costs						
Drip irrigation system for trees, (IPS hose in sleeve between tree wells),						
system for shrubs/groundcovers/pots, water meters.	1	allow	•	5,000,00		
o state include.		allow	\$	5,000.00	\$	5,000
Tree planting preparation costs (Under sidewalk near redwood trees)			Su	btotal	\$	5,000
3' depth excavation of area to receive structural soil incl. offhaul	89		_			
Structural soil at \$35/CY plus placement	89	су	\$	25.00	\$	2,225
	99	су	\$	45.00	\$	4,005
Landscape and sidewalk maintenance-6 months	 		Sul	btotal	\$	6,230
Sidewalk and crosswalk steam cleaning every 6 months	 					
Tree maintenance	544	sf	\$		\$	82
Landscaping	10	ea	\$	24	\$	240
	200	sf	\$	0	\$	24

	Subtotal	S	346
TOTAL FOR SOUTHEAST STREETSCAPE AREA			\$42,179,60
			942, 179.00

SOUTHWEST STREETSCAPE AREA Pedestrian barriers and control		ļ			
redestrian partiers and control	1	allow	\$ 1,000.0	0 \$	1,00
Demolition		ļ			
Adjust (E) Utility Rim to grade					
Demo (E) Curb & Gutter	1	ea	\$ 1,000.0		1,0
	94	lf	\$ 1.0		
Demo (E) Concrete sidewalk Pear tree removal	1,622	sf		0 \$	1,6
	2	ea	\$ 400.0) \$	8
Pear "boxes" to be removed NIC	2	ea	\$ 400.0) \$	8
Irrigation system demolition (Remove valves and cap ex. lines only)	1	allow	\$ 500.0) \$	5(
			Subtotal	\$	4,8
Lighting Costs					
14' height acom pole lights (plain)	3	ea	\$ 2,500.0	5 \$	7,5
Twinkle lights in trees	2	ea	\$ 800.0		1,6
			Subtotal	\$	9,10
Landscaping costs			- Castotai	+	3,10
Fine grading	250	sf	\$ 1.00	5 \$	25
12" depth topsoil import and spreading for groundcover & shrubs	9	cy	\$ 100.00		
Planter mix and installation in pots	3				90
3" gravel mulch under tree grates only	50	cy	\$ 100.00		30
3" depth bark mulch, including installation		sf	\$ 0.60		3
Weed control fabric, installed (Includes underneath tree grates)	250	sf	\$ 0.60		15
24" box trees (includes staking)	250	sf	\$ 0.50		12
1 gallon groundcover	2	ea	\$ 350.00		70
	62	ea	\$ 9.00) \$	55
Annuals 4" pot	24	plant	\$ 3.00) \$	7
			Subtotal	\$	3,08
Concrete work					
2" AC Overlay	2,307	sf	\$ 1.00	\$	2,30
Curb & Gutter	195	lf	\$ 18.00	\$	3,51
New peach/pink colored sidewalks with blue-green tile inlays	2,092	sf	\$ 8.00		16,73
New vehicular 6" concrete sidewalk w/color and tile inlays	800	sf	\$ 12.00		9,60
Special paving to encourage window shopping	54	sf	\$ 20.00	_	1,08
xcluding AC overlay		<u> </u>	Subtotal	\$	30,92
	1		Odbiotai	+*	30,92
rrigation Costs	_			+-	
Orip irrigation system for trees, (IPS hose in sleeve between tree wells),			<u> </u>	+	
system for shrubs/groundcovers/pots, water meters.	1	alland	¢ 5000.00	+	
- 7		allow	\$ 5,000.00		5,00
Site Furnishings			Subtota!	\$	5,00
Vood benches				<u> </u>	
Artistic bike racks	2	ea	\$ 2,000.00		4,000
	. 1	ea	\$ 800.00	\$	800
Clay pot (includes drainlines)	6	ea	\$ 800.00	\$	4,800
Cast stone trash receptacles	1	ea	\$ 1,000.00	\$	1,000
Cast stone recycle bins	1	ea	\$ 2,000.00		2,000
Metal tree grates 5' square, painted custom color	11	ea	\$ 1,000.00		11,000
			Subtotal	\$	23,600
ree planting preparation costs (For new trees)				† 	
depth excavation of area to receive structural soil incl. offhaul	114	су	\$ 25.00	\$	2,850
tructural soil at \$35/CY plus placement	114	cy	\$ 45.00	4	
nstall 4" french drain(STR 35 pipe) for trench, connect to storm drain	210	if I	\$ 45.00		5,130
ζ- · · · · · · · · · · · · · · · · · · ·	210				7,350
andscape and sidewalk maintenance-6 months			Subtotal	\$	15,330
idewalk and crosswalk steam cleaning every 2 months	0.000		•	1_	
andscaping	2,092		\$ 0		314
ree maintenance	250		.\$ 0		30
	2		\$ 24		48
nnual color	24	sf	\$ 3	\$	72
			Subtotal	\$	464
OTAL FOR SOUTHWEST STREETSCAPE AREA			Gubtotai	W	70-

BRIDGE AREA		Т		\Box		····
Pedestrian barriers and control		1	allow	\$	1,000.00	\$ 1,000
Demolition		\perp				
Demo (E) curb & gutter	100	5	If	\$	1.00	\$ 100

Demo (E) Concrete sidewalk	1,600	sf	2	1.00	\$	1 000
Irrigation system demolition (Remove valves and cap ex. lines only)	1,000	allow	-			1,600
Sale of the sale o	<u>-</u>	allow	3	500.00	\$	500
		ļ		Subtotal	\$	2,200
Tree planting preparation costs (For ex. sycamore tree)			<u> </u>			
3' depth excavation of area to receive structural soil incl. offhaul	33	CV	\$	25.00	\$	925
Structural soil at \$35/CY plus placement	33		9			825
Install 4" french drain(STR 35 pipe) for trench, connect to storm drain		су	\$	45.00	\$	1,485
the stander of the pape, for trending conflect to storm drain	50	lf	\$	35.00	\$	1,750
D.H		L i	Su	Subtotal		4,060
Bridge modification costs						
Remove/ paint/ replace existing metal railing and posts	1	ls	\$	10,000	\$	10,000
Custom concrete lighted sentinels at bridge	<u> </u>					
Patch/add existing 4" concrete sidewalk w/ peach colored pavement	4 070	ea	\$_	6,500	\$	26,000
Move fire hydrant	1,072	sf	\$_	8.00	\$	8,576
move me nyurant	1	ea	\$	3,000	\$	3,000
TOTAL FOR PRINCE 18-					\$	47,576
TOTAL FOR BRIDGE AREA						\$54,836.00

<u>Project Cost Estimate - Alternate 3a</u> SUMMARY

Base Project: Traffic calming north & south, tree repairs, plus additional \$35,000 for overlay on Old Redwood Highway

Project Name: Walkable Cotati Phase 1 Project Owner: City of Cotati Project Location: Cotati, CA	Project No.: Estimated by: Checked by: Date:	E99-7 Fisher/Wise Bertolero 1/8/01
Base Project Summary		
Mobilization	¢.	05.000
Intersection improvements	\$	25,000
Existing tree root pruning and structural soil*		NIC
Repair additional uprooted sidewalk	\$	138,594
	\$	37,500
AC Overlay-La Plaza to Park Ave., excluding Henry and Charles Streets North Entry traffic calming*	. \$	118,750
	\$	134,631
Bridge Area Modifications*	\$	62,220
Total (excluding studies/engineering)		

516,695

^{*}See detail on following pages

<u>Project Cost Estimate - A</u> DETAIL	Titernate	<u> 3d</u>			
Item	0	1 11 1	7		
	Quantity	Units	Unit Cost	ineering Estima	
EXISTING TREE ROOT PRUNING AND STRUCTURAL SOIL (for 14 sycamores and	1 redwood)	-	Unit Cost	 	To
o deput excavation of area to receive structural soil incl. offhaul	350	CV	\$ 25.00		
Pneumatic excavation of root zone of existing trees	15		\$ 1,000.00		8,7
Root pruning	15	ea	\$ 1,000.00		15,0
Crown reduction	15	ea	\$ 500.00) \$	2,2
Structural soil at \$35/CY plus placement	350	cy	\$ 45.00		7,5
nstall 4" french drain(STR 35 pipe) for trench, connect to storm drain	400	lf Cy	\$ 35.00		15,7
Patch/add existing 4" concrete sidewalk w/ lamp black, hand seeded aggregate	2,550	sf	\$ 8.00		14,00
I Winkle lights in trees	15	ea	\$ 800.00		20,40
3" gravel mulch under tree grates only	375	sf	\$ 0.60	<u> </u>	12,00
vietal tree grates 5' square, painted custom color	15	ea	\$ 1,000.00		22
	 	- Ca	Subtotal		15,00
25% contingency			Oubtotai	<u> </u>	110,87
OTAL FOR EXISTING TREE ROOT PRUNING. ETC.	 		TOTAL	 	27,71
ORTH ENTRY TRAFFIC CALMING	 	 	IOIAL	 	138,59
Pedestrian barriers and control	1	allow	\$ 1,500.00	\$	
	 	anow	, ψ 1,500.00	*	1,50
Demolition	<u> </u>			 	
djust (E) Utility Rim to grade	3	ea	\$ 1,000,00	le	3,00
Demo (E) Curb & Gutter	341	If	\$ 1.00		
Demo (E) Concrete Paving	350	sf	\$ 3.00		34 1.05
Demo (E) Concrete sidewalk	4,248	sf	\$ 1.00		4,24
sycamore removal (Includes stump removal typ.)	4	ea	\$ 1,500.00		6,00
i-hiiO/			Subtotal	\$	14.63
ighting Costs				'	. 4,00
4' height acom pole lights (plain)	18	ea	\$ 2,500.00		NIC
entinel light in median	1	ea	\$ 7,500.00	\$	7,50
ondonoula			Subtotal	\$	7,50
andscaping costs ine grading					.,,,,,,
2" don'th tonge! inventor to the state of th	1,279	sf	\$ 1.00	\$	1,279
2" depth topsoil import and spreading for groundcover & shrubs	47	су	\$ 100.00	\$	4,700
lanter mix and installation in pots	8	су	\$ 100.00	\$	800
gravel mulch under tree grates only	50	sf	\$ 0.60	\$	30
depth bark mulch, including installation	1,179	sf	\$ 0.60	\$	707
/eed control fabric, installed (Includes underneath tree grates) 4* box trees (includes staking)	1,179	sf	\$ 0.50	\$	590
ew lawn in plaza	6	ea	\$ 350.00	\$	2,100
gallon groundcover	115	sf	\$ 1.00	\$	115
nnuals 4" pot	294	ea	\$ 9.00	\$	2,646
ridais 4 pot	637	plant	\$ 3.00	\$	1,911
oncrete work			Subtotal	\$	14,878
urb & Gutter					
urb & Gutter (Center Island)	650	lf	\$ 18.00	\$	11,700
Ac Overlay	144	lf	\$ 15.00		2,160
" tall seat walls with tile inserts	12,812	sf	\$ 1.00		NIC
tall concrete pilactors with tile inserts and and an inserting	34	lf	\$ 125.00		NIC
tall concrete pilasters with tile inserts and cast stone caps (Roundabout NIC)	4	ea	\$ 1,500.00		NIC
ew peach/pink colored sidewalks with blue-green tile inlays	3,110	sf	\$ 8.00		NIC
ew 4" concrete sidewalk w/ lamp black and hand seeded aggregate becial paving to encourage window shopping	2,031	sf	\$ 8.00	\$	16,248
Asset passing to encourage window snopping	114		\$ 20.00		NIC
			Subtotal	\$	30,108
igation Costs					
	T				
ip irrigation system for trees, (IPS hose in sleeve between tree wells), spray irrigation system for shrubs/groundcovers/pots water meters.				 	
oystern for stirrubs/groundcovers/pots water meters.	1	allow	\$ 5,000.00	\$	5,000
			Subtotal	\$	5,000

l f					
		Sul	ototal	\$	4,060
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	cy	\$			1,485
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325	sf	\$			9
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